AMERICAN CINEMATOGRAPHER

FOR AMATEUR AND PROFESSIONAL PHOTOGRAPHERS

February
1939

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Cinematographers

Expedients for
New Film
VALENTINE

•

Moviemaking Gadgets
TEOREY

•

Metal Film Progresses
CARTER

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Rivalry in Contest
STULL

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Palmer and Rennahan
Take Award
BLAISDELL

•

Editing Odd Footage
SPRUNGMAN

•

"Girl Next Door"
(A SCRIPT)

•

Fonda Developer

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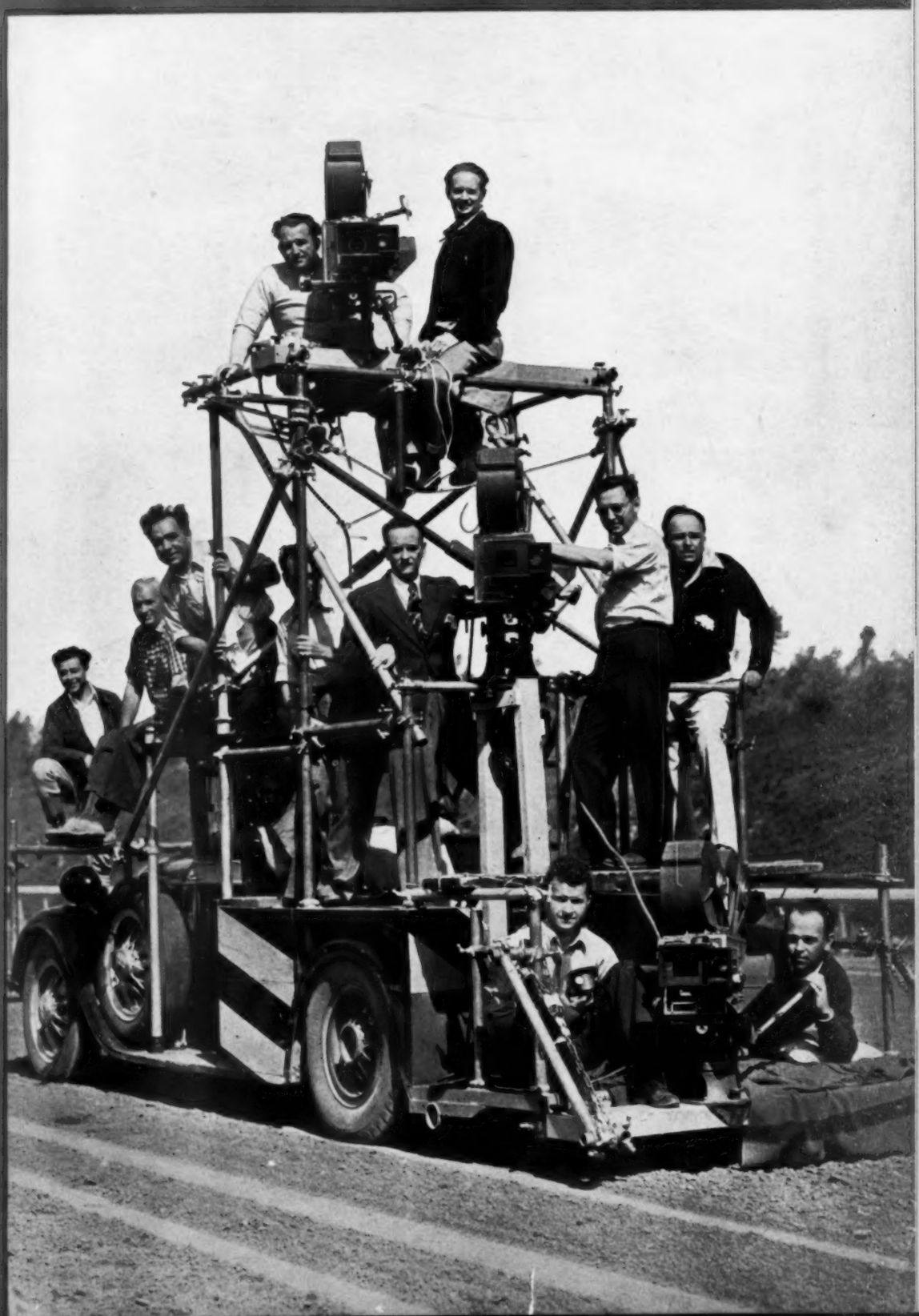
New Method for
Interior Photography
CASTLE

•

Ladies' Party April 14

Technicolor Truck on
"Kentucky"



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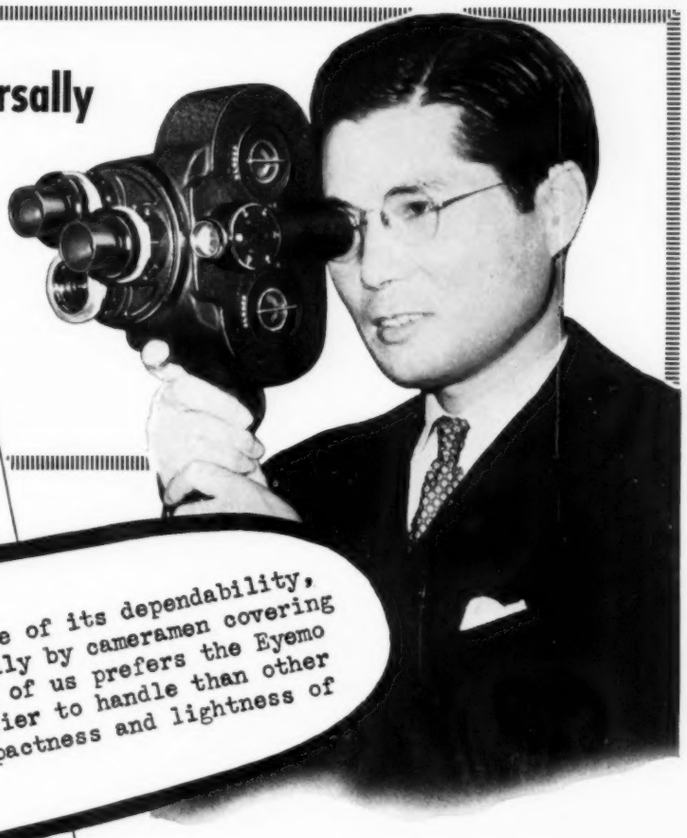

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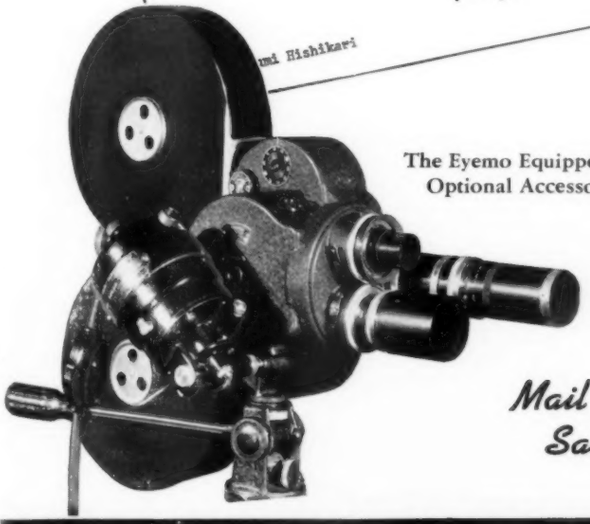

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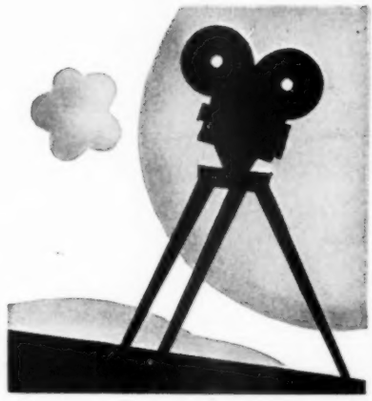

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Front Cover

THIS unusual picture of a camera truck shows the second unit of Twentieth Century-Fox's "Kentucky" crew at the Inglewood track. One of the Technicolor workers describes it as the best camera truck in the industry. Its designer and owner, "Kansas" Grosso, is shown looking out from the driver's seat.

At the top, left to right, are Harry Jackson, A.S.C., and Thad Brooks; at the extreme left of middle row, unidentified track employe; Russell Crane, Phil Mandella, Charles P. Boyle, A.S.C., in charge of the three Technicolor cameras and the crew (he may be recognized in spite of his disguise as he looks out from behind the pipe); Roy Clarke, Peter Keane and Otto Brower, director of the unit; in the driver's seat, "Kansas" Grosso; at the rear and the lower camera, Roger Mace and Bill Whitley.

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MAKE-UP AND SET PAINTING AID NEW FILM

By JOSEPH VALENTINE, A.S.C.

Photos by Roman Freulich

CINEMATOGRAPHY is a good deal like a mathematical equation: change one factor, and you find it has become necessary to make corresponding changes in several others to keep the result correctly in balance.

Just now we're changing one of the basic factors—film—with the introduction of the new "fast film" emulsions. In consequence, most of us are discovering it is necessary to make complementary changes all along the line in order to keep the final result at the balance we call good cinematography.

Deanna Durbin (left) wearing conventional make-up and Nan Grey (right) wearing the new make-up, in a scene from "Three Smart Girls Grow Up." The film used in the still camera did not have the sensitivity characteristics of "Plus-X," but some idea of the improved skin textures given by the new make-up may be gained nonetheless.

This statement implies no criticism of the new emulsions. They are a very practical advance in film making and offer great possibilities for the advancement of cinematography. But if we are to utilize these possibilities to the full we must recognize that the sensational increases in speed shown by the new emulsions are by no means the only changed factors in our problem.

Utilizing this increased speed is a relatively simple matter, depending a great deal upon each individual cinematographer's taste and technique and upon the methods of the laboratory processing his negative.

In my own case I have found it possible to make an overall reduction of about 70 per cent from the lighting level I normally employed with the older film. This is merely a matter of using smaller lamps, smaller globes and—especially in the case of "broads"—more diffusion.

Until the eye becomes accustomed to reading these new, low levels of illumination, a modern, photoelectric light meter, such as the General Electric which I have for some time used, is extremely helpful.

Increased Sensitivity

But lighting and exposure levels are only part of the problem. Perhaps the most important single factor in dramatic cinematography is the relation between the color sensitivity of an emulsion and the reproduction of pleasing flesh tones.

This brings us to the closely interrelated problems of camerawork and make-up. Technical factors that affect one are likely to affect and demand changes in the other.

This was one of the first things we encountered when we started photo-

graphing my present production, "Three Smart Girls Grow Up," on the new film. To put it briefly, the rushes showed that faces were not photographing as we were accustomed to seeing them.

I took this as an indication that the film and makeup were not properly coordinated. It seemed to me that with the overall increase in speed, the film's response to the red elements in our standard make-up had become more noticeable.

Speaking photographically, faces are highlights — and a highlight-response that would not be noticeable on a slower film could be magnified by a faster, more sensitive film.

This has an important bearing on the photographic rendition of flesh tones. The standard "panchromatic" make-up is a range of warm brown tones, all of which contain a considerable proportion of red.

With film of what we have heretofore considered normal sensitivity, these red-brown tones have been photographically neutral, giving a correct black-and-white rendition of normal face tones.

Non-Red Make-Up

The higher sensitivity of the new film changes the effect of this standard make-up. The red component of the make-up registers with an intensity out of normal proportion, while the other components register approximately normally.

If increased film speed were the only consideration we might expect to solve the make-up problem as we did when superpan replaced the earlier pan, by simply using a darker shade of make-up. Even with the increased sensitivity of the new film it might be thought that this expedient would solve the problem.

But in actual practice this cannot be done successfully, as the fact that the red components and the rest of the base tone do not photograph uniformly destroys the conventional balance. Despite the best efforts of cinematographer and make-up artists, faces have an unpleasant tendency to photograph muddily—to look unwashed and blotchy.

As we discovered this, Universal's make-up chief, Jack Pierce, and I agreed that the quickest remedy lay in a completely new system of make-up. To that end we experimented, and with the collaboration of the Max Factor organization finally evolved a range of grease paint and powder which restore the normal balance when used with the new film.

Like the conventional product, the new make-up is fundamentally a range of photographically neutral brownish shades. But the red component has been drastically reduced so that the natural color of the face can come through.

The result is a range of make-up tones which remain photographically neutral with the new, more sensitive film. Kodachrome stills made on the set also indicate that this make-up will be equally useful for natural color cinematography.

Thin Application

The nature of the pigments and support used in the new make-up is such that it must be applied much more thinly than has been common with conventional make-up. The very thinnest coating suffices—so thin that much of the natural tone of the skin shines through.

The new make-up can be used for shaded or corrective effects quite as well as the old. However, greater care must be taken in blending the adjacent areas of different shades, or the more sensitive film will reveal the artifice.

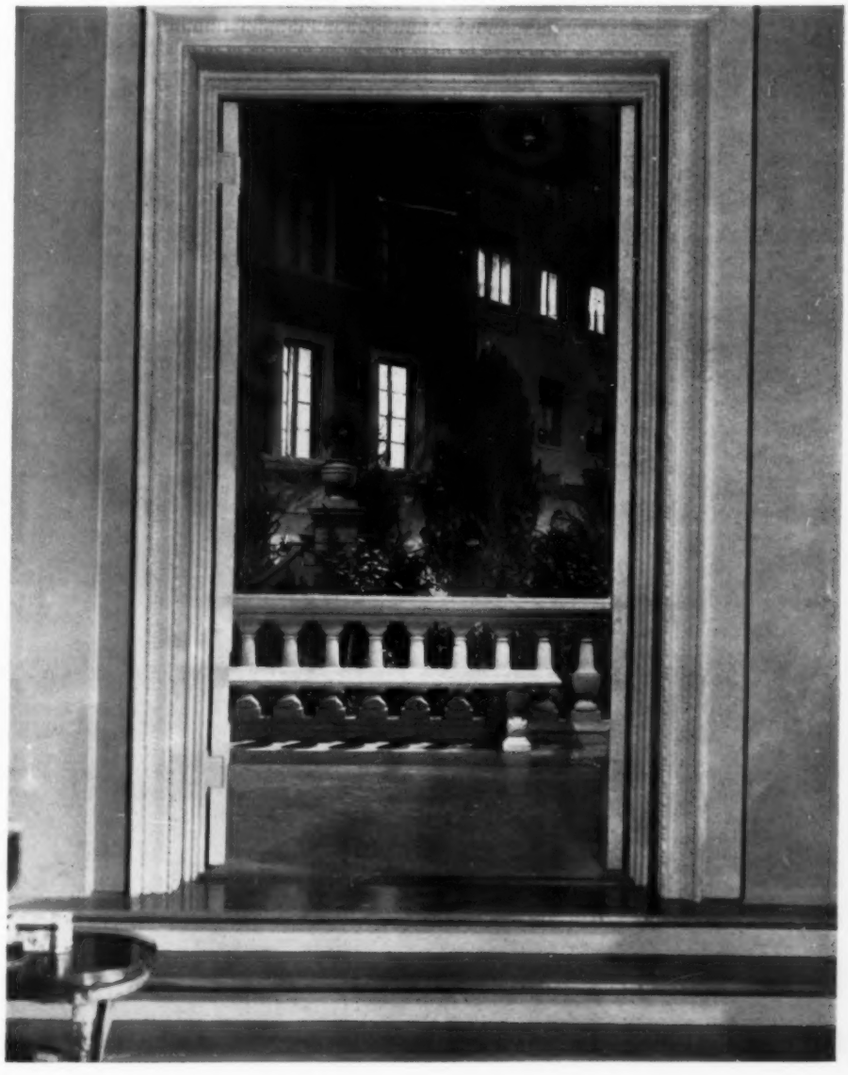
A special powder, chromatically the same as the base, and corresponding lip-rouges, etc., are being compounded to complete the system. A full range of shades is of course being provided, to meet all normal requirements for making up both women and men.

While the shades compare closely with those of standard make-up, they are for convenience given lower numbers, ranging from 1 to 12.

The first player to wear the new make-up for actual production was Nan Grey. From the start of production we had trouble making her look as well as she should with the old make-up and the new film. To put it bluntly, no matter what Pierce or I did, we could not give her the clear skin texture a young girl with her fair hair and skin should have.

Therefore as soon as we felt reasonably confident of the new make-up, we applied it to her. And our troubles were over: her face rendition cleaned up at once, losing its blotchy, muddy tones, and she became the clear-skinned young girl she should be.

A similar improvement was noticed when Robert Cummings, playing opposite her, also changed to the new make-up. Now as fast as production schedules permit, the rest of the cast, including the star, Deanna Durbin, are being



One of the natural-colored backings lit for a night effect. The body of the backing is opaqued, and the windows illuminated by light shining through areas not blocked out.

Universal's "Three Smart Men"—Director of Photography Joseph Valentine, A.S.C. (left), Director Henry Koster (center) and Producer Joseph Pasternak (right), studying light tests of a day's shooting on "Three Smart Girls Grow Up."

switched to the new make-up, with corresponding improvement.

The individual reactions of the players to the new make-up revealed an angle which those of us who are concerned with make-up, so to speak, in the abstract, might ordinarily overlook.

The people who wear the make-up have all commented that in addition to giving them a better appearance on the screen, the new make-up, due to the much thinner application necessary, is more comfortable to wear. This, of course, pays practical dividends in better, more natural acting.

Pastel-Toned Sets

Another innovation put to its first extensive use on "Three Smart Girls Grow Up" is a new system of set painting upon which Art Director Jack Otterson and I have collaborated. As it is based on an idea with which we have experimented for nearly a year, it can hardly be called a development stemming from the new film; but in practice we have found it is even more advantageous with the new film than with the old.

Briefly, it is a system of painting sets with a standardized range of pastel shades.

For some time Otterson and I had been asking each other why sets should be painted so generally in a monochromatic range of whites and grays, and why, on the rather rare occasions colors are used, they should be used apparently so haphazardly.

Sooner or later, we reasoned, natural color cinematography will force us to use color. Until then, why should we not make use of the known facts of monochrome color rendition to make sets more natural, and cinematography and lighting simpler?

Fortunately here at Universal we are in a position where we enjoy opportunities better than ordinary to experiment with anything which seems to have a reasonable chance of benefiting production. With such executive cooperation, Otterson and I were able to make rather extensive tests of many pigments and ideas.

Finally we arrived at the present range of colors and shades which have been standardized and are being used for all the interiors of our present film.

Standardized Colors and Shades

This system consists of four standardized pastel tones: a violet-gray, a blue-green, a pink, and a tan. Each of these is in turn divided into four standardized shades, ranging from a No. 1 or light shade, which is virtually a pure color, to a No. 4 or dark shade. The darkened numbers are produced not by deepening the color but by graying it.

In practical terms this means that we have a range of sixteen standard colors for use in painting our sets, each tone and shade of which is an absolutely known factor to both the cameraman and the art director.

When the art director specifies such-and-such a color scheme for his set, he not only knows precisely how it will look, but from tests and production already available to him he knows how each shade will photograph.

He has ample range of coloring to afford his artistic imagination full play, and in using these tested colors he can be confident that the likelihood of expensive misunderstandings between sketch and camera are virtually eliminated.

All of us have had experience with set colorings which in the art director's sketch or in a sample appeared one thing, and which turned out to be quite different on the set itself, and with

(Continued on Page 85)

One of the pastel-toned sets for "Three Smart Girls Grow Up." The walls are painted in two shades of pink; the columns, baseboard, corona, etc., in light tan; the arch over the far door in light violet-gray; the wall in the right foreground is in two light shades of blue-green.

GADGETS FOR THE MOVIEMAKER

By ROBERT W. TEOREY

MANY a movie maker with a low-priced camera in his possession is the producer of such outstanding films that viewers of his efforts are often led into the mistaken belief that the filmer is the possessor of one of the ultra-fine cameras with all the refinements and accessories deemed necessary in bringing forth the most involved effects.

However, as has been repeatedly voiced, the answer lies with the man behind the camera and credit is due him in the majority of cases rather than to the particular piece of mechanism exposing the film. If we have a real desire for unusual effects in our pictures—then no matter how simple the camera—we can achieve them if we make up our minds to do so.

The sum of the whole situation revolves upon our willingness and ability to apply simple adaptations or devise useful expedients applicable not only in filming, but in the later stages of editing and projecting; and if we are able and desirous of applying ourselves to these ends many short cuts are presented that speed up our efforts and help in bringing to our audiences more finished, entertaining and smoothly running movies.

Doing Much With Little

After all, this is our chief aim in filming and slight efforts on our parts to better our cinematics should always result in happy endings.

For some years I have used the popular Eastman Cine 8 in making my movies. This camera is equipped only to take pictures at the rate of 16 frames per second and to indicate approximately the amount of footage remaining to be exposed.

In other words, it is built for ordinary movie making only. Yet, with all its limitations, I have succeeded in making super-impositions, multiple exposures, animations and lap dissolves with excellent accuracy and a minimum of labor.

Formerly when I desired to make double exposures, lap dissolves, etc., I timed my leader and scenes to be used for the effects with the aid of the second hand on my watch. In time I became dissatisfied with this method and decided my camera should do this work.

The gadgeteer within me got busy. I devised and incorporated an audible timer in my camera that proved to have more than a single use.

Two tiny lengths of spring brass were cut to about an eighth of an inch in width. These were bent in the shape of an L with the upright about 3/32 of an inch in height. The lower projection of each served as a soldering base and were secured, one directly opposite the other, on the surface of the large film sprocket within my camera.

A long piece of the same material was then cut to the width indicated for the height of the upright and this was soldered to the inner top edge of the camera cover. This strip was bent toward the sprocket, and when the cover was in place the tip encountered the short uprights briefly as it was caught and released during filming (Fig. 1).

Invaluable for Timing

The film sprocket is exactly eight inches in circumference. Thus a click was audibly apparent for every four inches of film exposed. It was just a matter of a short time until I learned the numbers of clicks necessary to run off the leader of a new roll of film and this proved more accurate than the visual footage indicator built in the camera.

In making double or multiple exposures it proved to be invaluable for timing the scenes to be used for special effects. In addition, this timer proved its worth in noting the length of scenes during ordinary filming, thus eliminating

Fig. 1. Pointers indicate spring in cover and tips on camera film sproket.

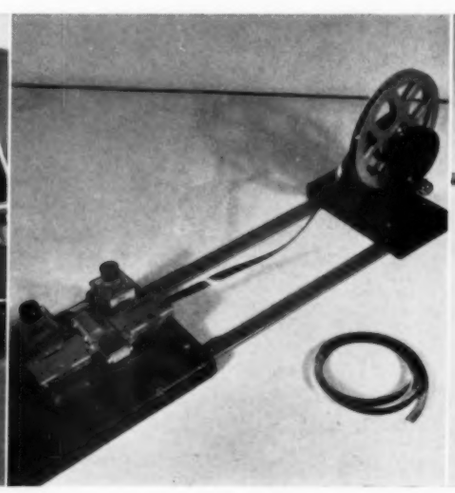


Fig. 2. Flat curtain rods permit drawing out and telescoping of working board.

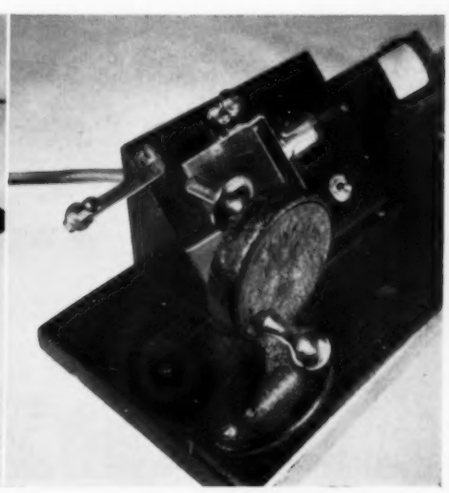


Fig. 3. Supernumerary spindle shown on left of film viewer.

any doubt as to whether the shot would be too short or too long.

Filmers often have occasion or the desire to mask off scenes to procure multiple exposures. I used the small slip-on filter holder made for my camera with very good effect for holding a mask in position.

The filter glass is held in place by a screw retaining ring. Removing the filter I used it as a guide to cut a mask from black paper. This was cut in half and a section fitted in the holder which was slipped on the camera lens to mask off the portion of the scene not desired.

When the unmasked portion of the scene had been exposed and the film had been run through the camera for the second time for the next exposure, I rotated the mask to cover the exposed section, being then in readiness for shooting on the unexposed portion of the film.

Even with wide open lens, this mask, although close to the objective, gave excellent results.

Editing Board Important

The editing board is exceedingly important in putting the finishing touches to our scenes. Without editing we would generally have a hodgepodge of shots on our reel—mostly unrelated and in many cases running too long upon projection—so it readily can be understood that this task is of paramount importance in smoothing out the production of the day.

Usually the rewinds, film viewer and splicer are arranged on a long board that most of us find awkward to store away due to its length. To do away with this undesirable feature I cut my board to the shortest possible length with just sufficient room to mount my equipment.

Then I sawed off the right end section of the board which held my rewind. Fastening flat curtain rods on the under side made it possible for me to draw out the right rewind to ample distance for comfortable use and by merely telescoping the unit I found the minimum of space was needed for storing (Fig. 2).

As now manufactured, the Eastman film viewer I use necessitates a long board, as the left rewind has to be offset in order to thread the gate. I built a small arm with reel spindle which I mounted on the viewer (Fig. 3 and 4).

This permitted my film reel to rest near the viewer gate, and being in the same plane as the latter my editing was simplified several times over. Those using this type viewer and not wishing to work with metal can easily mount a small wood upright on the editing board adjacent to the viewer.

A bolt of the diameter of the hole in the reel can be secured to this to serve as a spindle. Of course this helps in more closely grouping the editing accessories and facilitates the actual work involved in working over your film.

Keeping Tabs on Film

Various methods are used in editing to keep tab on cut film for splicing. One of the simplest is to use spring clip clothespins threaded on a string—each pin numbered in rotation to serve in identifying the film cuttings from the work sheet. I worked up a more permanent arrangement from two cardboard folders commonly used for filing purposes.

I bent the edges of one of the folders to form a shallow box—each section just deep enough to hold coils of cut film. Then cutting long strips slightly more than my film width from the other folder, I glued them in criss-cross fashion in the shallow container, finding upon completion that I had twenty receptacles in each half, or forty in all. These I numbered for film identification (Fig. 5).

I next made an inner cover from the remaining half of the second folder, and when I found it necessary to discontinue work for any reason I placed this between the two halves to prevent the film in the top section from dropping into the lower, closed the affair and snapped a rubber band about it. In this manner my cut film could be easily put away, free from dust and quickly available for editing at the next opportunity.

Naturally all these little expedients are very helpful in preparing the film for projection. The latter deserves a fair amount of attention, for during that function the results are brought to the scrutiny of others.

Lessening Noise

Most projectors are rather noisy in operation, and a sponge rubber pad placed beneath it will appreciably lessen the noise. On many occasions it has been my experience to hear the cry for lights upon the completion of the showing of a reel. Changing reels seems to be something we are unable to overcome; however, it should be done as painlessly as possible.

To overcome the light problem I installed a double pole toggle switch on my projector lamp house. I cut one section into the projection lamp circuit and connected a pilot lamp to the other pole of the switch.

When the reel ended, merely snapping off the projection lamp automatically lighted the pilot lamp, thus eliminating that unpleasant call or search for room lighting.

The pilot lamp used for the purpose is of the type with a bakelite shield purchased in any dime store for a few cents. I mounted it on my projector base (Fig. 6).

This projector has a lens with a knurled end for finger grip during focussing. This is a bit awkward to handle, so I focussed for my usual screen size—marked the outer edge of the lens barrel and drilled a small hole in it just large enough to accommodate the end of a small bolt about three-quarters of

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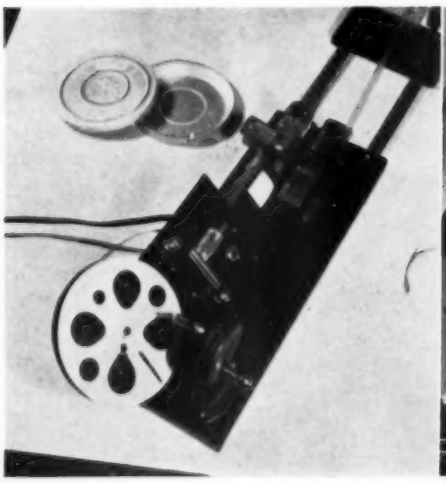

Fig. 4. Reel in place on auxiliary spindle.

Fig. 5. Film editing receptacle ready for use with inner cover shown on left.

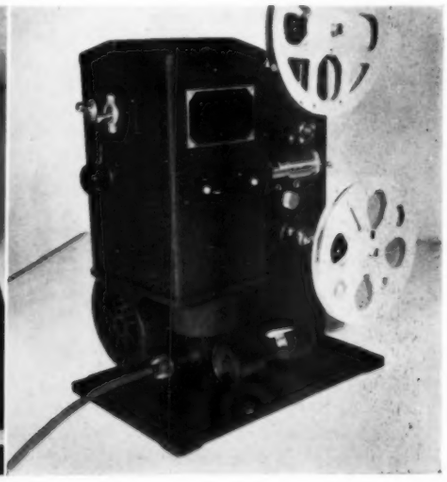

Fig. 6. Extra switch shown on lamp house; pilot light on base. Bolt for easy focussing visible on lens barrel.

METAL FILM STEADILY PROGRESSES

By DR. ROBERT W. CARTER

with Taylor-Sloane Corporation,
342 Madison Avenue,
New York

THE advent of metal film for practical use took place in November, 1938. Previous articles in this magazine have detailed the history and technical development of metal film since the first decade of this century.

Executives, exhibitors and experts in the motion picture field have witnessed demonstrations of pictures and sound from metal film. They were unanimous in their opinion that metal film has an immediate and widespread use in the entire projection field.

The writer is grateful for the flood of inquiries which followed the appearance of the previous articles and takes this opportunity to discuss and answer some of the principal problems and queries presented in the correspondence.

It should be stated at the outset that metal film will in no wise jeopardize the present status of the professional motion picture operators. It is true that the fire hazard has been completely eliminated. It is also an established fact that metal film will not break or tear in its passage through the projection machine.

Concentrate in Projection

We submit that with the removal of these hazards the operator will be better able to concentrate his attention on his main objective, the superior projection of motion pictures.

The first machine used for the projection of metal film was an adaptation of a standard model with gate, optical system and soundhead converted especially for this purpose. The machine was so constructed that it could serve a double purpose. It could be used for the projection of both standard cellulose film and metal film.

The task of changing from one to the other was a matter of a few seconds. For metal, the lamp is swung to the front, a special gate is put into position and the metal film is threaded through the other soundhead which is specially constructed for metal film.

This first machine gave us the basis for a fair comparison between metal and celluloid film, since both could be projected from the same machine under the same conditions. The tests proved that metal film was equal to celluloid film in pictorial quality and slightly superior to celluloid film in sound value.

Physical Facts

For the benefit of those who desire the fundamental physical facts about metal film we state the following: The film is constructed of a special alloy and is usually .003 inch in thickness; the image is on a highly reflective surface, and projection is by reflection from this surface.

A reel of 1000 feet, 35 mm., weighs 6½ pounds. The film may be spliced with a special cement in the usual manner. The film is threaded through the projection machine in the standard manner with the exception of one sprocket which leads to the reflecting soundhead.

The film is not affected by the heat from the lamp. It will never shrink or stretch, and with ordinary care will last indefinitely.

The optical system does not require condensers or any device to prevent the light ray from striking directly upon the film. The full power of the light is impinged directly upon the metal film as it passes through the gate aperture.

The light reflects directly from the polished film surface through the lens to the screen. Information regarding the optical system is found in the American Cinematographer for September, 1938. This article also gives a reproduction of the actual tests of the reflection factor of metal film as compared with ordinary film.

In this test, metal film shows a reflection factor 12 per cent higher than cellulose film. Anxiety was expressed about the possible noise that metal film might make in its passage through the machine.

The demonstration proved that metal film is just as silent as the standard film. The reason for this is that the film does not shrink or stretch, and passes through the sprockets with mechanical precision.

Emulsion Character

The important questions from the various laboratories center around the character of the emulsion and the processes of printing and finishing.

A positive print is made on a metal film with the same machine and in the same manner as a positive print on cellulose film. The negative is brought into contact with the sensitized metal and exposed to the source of light. The printing time on metal film for any given emulsion is less than for ordinary film.

Developing is more rapid than usual, and the time for fixing and washing is about half that ordinarily required. The drying economy is the most remarkable of all. The film may be passed through a drying cabinet at temperatures as high as 450 degrees F. At this temperature the film will dry in 2½ minutes. Emulsions on metal may have the same photographic values as those used on cellulose.

Where metal film is required as a negative, the exposure time in the camera and the general photographic technique is the same as usual. The developing, fixing, washing and drying of a metal film negative may be done in one-third the usual time.

The outstanding superiority of a metal film negative is the unusual absence of grain, coupled with positive permanence and practical indestructibility.

Any Type Emulsion

The metal negative must be printed by optical printing. When prints on both sides of the metal are required, a standard Debrie printer may be used for this purpose. If this type of printer is not available, both sides of the film may be printed in a standard machine, and the whole then developed. Care should be exercised to keep the emulsion surfaces from scratching or abrading while in a wet condition.

Any type of photographic emulsion may be coated upon our metal film. The essential physical requirement is the treatment of the emulsion together with the treatment of the metal base. This includes the necessary reduction of the interfacial tension in the emulsion and the rendering of the metal surface compatible with such an emulsion.

The advantages of metal film from the

laboratory angle are many and important. These include positive uniformity in the co-efficients of expansion and contraction, the elimination of stretching and shrinking at all times and under all conditions, and standardization in all operations because of the fixed factors inherent in metal film.

Life of Cellulose

We believe that metal film is ideal for color work. It is well known that the passage of light through the cellulose base and three color film surfaces not only diffuses and refracts the light but seriously reduces its velocity.

We have found that a color print on metal with its high reflecting surface gives a more luminous image on the screen than is obtainable with the ordinary color film now in use.

Coating, printing, developing and projecting from metal film are based on fixed physical factors, and the making of color film can be likewise standardized.

Our statement in a recent issue of a widely read weekly magazine that cellulose film would not last for 20 years was challenged by one of the distinguished scientists in the photographic field. In our answer, we produced such overwhelming evidence that we believe this phase of the controversy to be now closed.

To the many librarians, government officials and technicians, we convey our regrets that we were forced to insist on the fact that cellulose films were not to be depended upon for permanent records. We submit that all unbiased scientific investigation has established the fact that cellulose film should not be used where an endurance of over ten years is essential.

Is is gratifying to know that valuable cellulose negatives now in existence may be printed on metal film with the positive assurance that they will endure indefinitely.

Those engaged in aeronautical photography have been concerned with the adaptation of metal film for their purpose. We propose to produce an 8-inch roll of metal film in 500-foot lengths that will not exceed 16 pounds in weight.

With a positive emulsion, this may be developed in the air and calculations carried out with the utmost accuracy based on the fact that the metal expands and contracts equally over the entire surface.

In Case of Fire

We have taken positive prints on a roll of metal with a positive solution, exposed the same, and secured the finished print in less than three minutes. Photographic development on a metal film is confined exclusively to the emulsion. In amidol or metol hydroquinone, development takes place in less than two seconds washing; fixing may be done in 60 seconds; and final washing and drying over any heated unit in a further 60 seconds.

We find the results of the prints are permanent and almost grainless. In case of fire, the image is not destroyed until the heat reaches the melting point of the metal.

In conclusion, it is necessary to deal briefly with the great number of inquiries from persons using 16 mm. film. This is of special interest to us, as we believe the intimate records of childhood and the valued records of science and business deserve a permanent photographic medium.

We are developing as rapidly as possible machines for projecting 16 mm. metal film, since we are convinced that the high costs in this field will be considerably reduced with the use of our film.

This feature together with the facts of positive non-inflammability and permanence offers professionals and amateurs in the 16 mm. field something to look forward to with anticipation.

Major Contribution

To the engineers, architects and various craftsmen who require metal film for maps, diagrams, patterns and many other uses, it must be repeated that we are research engineers, and that as fast as capital will cooperate with us we will be able to produce the material and equipment to comply with the various requests.

It is particularly gratifying that metal film makes a major contribution to the field of sound recording of voice, music and all phases of sound reproduction. The sound track on our highly reflective metal ribbon has proven to be ideal for the reproduction of radio programs.

Both sides of the film may be used and as many as ten tracks may be printed on each side, thus giving 200 minutes of sound recording on 1000 feet of film that weighs 6½ pounds and takes up a space 8 by 1⅜ inches.

One of the major applications for metal film is in the field of permanent record. The opportunity now presents itself to record imperishably the word and deed of our living great, distinguished men and women in the fields of science, literature, medicine, politics and the other ranges of human endeavor.

What would we not give if we could see and hear the immortals who have made their impress upon the history of American civilization. The utmost which our forefathers could do was to record their words and actions by means of books.

The least we can do for coming generations is to let them see and hear as well as read the accumulated wisdom of our age. Education from books is a slow laborious process; education from the silver screen is the tuition of the masters in person.

New B&H Film Shows How Studio Pictures Are Made

By the time this appears in print the new Bell & Howell film entitled "How Motion Pictures Move and Talk" will have been flashed upon the screen in thousands of schools, from coast to coast.

This fascinating educational film makes plain to all who see it the mechanical, electrical and visual principles through which modern talking movie films are made possible.

The pictured story traces the production of a Hollywood feature release from the unperforated raw film to the eventual shipment of 16mm. reduction sound prints in labeled metal containers. It illustrates "persistence of vision," the momentary retention of images within the eye which makes possible the illusion of motion upon the motion picture screen.

The part played by each successive cine machine—perforator, camera, developing machine, splicer, printer, projector—is then made clear. Each is shown contributing its special bit toward attainment of the final sound-on-film motion picture product.

It Is on Sale

Inquiries have been received regarding the booklet on documentary films written by Edward H. Schustack, the title of which is "The Documentary Film: History and Principles. Publication No. 2 Film and Sprockets Society of City College of New York." It may be secured by addressing the Art department, City College, 139th Street and Convent avenue, New York City, and inclosing 25 cents.

Baby Keg-Lite Found Ideal For Use on 750-Watt Globe

The popular Baby Keg-Lite of Bardwell & McAlister, Inc., has been found to be an ideal lamp in which to use the new 750-watt globe just introduced by the General Electric Company. Tests concluded at the BM plant show the 750-watt globe to give the same life as the 500-watt prefocus projection lamp which has been used in the studios for some time.

During these tests the lamp housing was not unduly hot, nor was there a trace of blistering or other globe deformation.

The 750-watt light unit is in a T-24 bulb with medium bipost base. It has the same light center and is interchangeable with the 500-watt T-20 medium bipost lamp. The Baby Keg-Lite is regularly supplied with either this new medium bipost socket or the older prefocus socket.

A recent optional feature on the Baby Keg-Lite is a collapsible stand which can be conveniently carried in a small space.

KEEN COMPETITION MARKS 1938 CONTEST

By WILLIAM STULL, A.S.C.

COMPETITION in the 1938 American Cinematographer International Amateur Movie Contest was keener than ever before. As one who has participated in the judging of virtually all of these affairs since the first contest in 1932 I can certify that the judges this year had a tougher job than ever before.

Every year there have been plenty of outstanding films; this year there were more than ever. As a rule there has been a well-marked gap between the winners and the honorable mentions and between these and the field. This year, on the other hand, the standard of competition had so advanced that these gaps had almost vanished.

Virtually all of the winners of class awards were serious contenders for the grand prize; the final judging sessions required hair-splitting on a basis as strict as though an award for professional cinematography were being decided.

In the same way most of the winners of honorable mention proved perplexingly close to prize winning calibre. And many of the unsung entries that made up the field merited honorable mentions, had not the judges been forced to draw the line somewhere!

NATION BUILDERS

James Sherlock's "Nation Builders," in winning the grand prize, therefore won under the most exacting of judgment. Technically it was almost flawless; my own score sheet comments on but a single scene of less than professional phototechnical quality.

Most remarkable was the smoothness of Sherlock's filter continuity throughout this 900-foot film. Repeatedly we saw scenes where an unwary filmer might have been trapped into playing to the gallery—utilizing an opportunity for spectacular overcorrection which by its very effectiveness would have distracted attention from the story the camera was trying to tell.

Sherlock instead held to a simple, normal correction—underplaying his effect—but keeping his camerawork a means to an end, rather than an end in itself.

The majority of the titles in "Nation Builders" were double-exposed against moving backgrounds. Here again the technical skill used was of an unusually high order. I have seen worse "doubles" in professional films, made with all the resources of studio optical printers. Achieving such results direct in the camera—and an amateur camera at that—is truly noteworthy.

The subject of "Nation Builders"—the history of Australia—is without doubt the most ambitious ever undertaken by any amateur filmer. The fact that the project was successful is in itself a tribute to Sherlock's skill.

Granted that in connection with the 150th anniversary of his nation's founding there were pageants re-enacting historic events and an opportunity for an alert filmster to photograph them: but how many times have not other amateurs scored dismal failures trying the same thing?

Filming such a pageant, it is all too easy to capture only the impression of history being re-enacted. Sherlock's scenes gave a convincing impression of history actually happening. The twentieth century background which must so often have been just beyond the camera-lines was never permitted to intrude upon his eighteenth and nineteenth century action.

Other similar sequences must, as he described in his article of last month, have been specially staged for his film. As far as the results on the screen go, there is nothing to choose between his staged sequences and the pageantry. If anything, the technical details of properties, costuming, and the like in his own scenes are the more carefully done.

Attending to the details of casting, costuming, make-up, locations and the like must have been a huge task—but on the screen only a smooth feeling of reality gives indication of how brilliantly these problems have been mastered.

Volumes might be written about Sherlock's cutting in this film. Paralysis of the shears is a major malady among most of us when we come to editing our own films. "Nation Builders" is a visual sermon on the subject. With perhaps one exception, every sequence told its story fully, yet so economically it leaves the audience always wishing for more. There is the secret of good editing!

And—lest you think the editing was good because of lack of material, remember that the first assembly of this 16mm. epic measured 3,000 feet—the final version but 900!

VIDA PACOIMA

Until Sherlock made it two in a row with "To The Ships of Sidney" followed by "Nation Builders" but one man had captured the grand prize in these contests twice successively. This man, Randolph B. Clardy of the Los Angeles 8mm. Club, again made himself heard from by winning the 1938 Photography Award with an 8mm. color film, "Vida Pacoima," an idyllic visual narration of life on a typical Sunday in a little Mexican village in Southern California.

One can appreciate this film from several viewpoints. It is a triumph of pictorial cinematography. Enlarged frames from any of its scenes would be worthy of hanging in any of the world's great still-camera salons. As in his earlier films, Clardy shows a unique understanding of cinematographic composition. He makes the pictorial elements of each scene play a vital, if unobtrusive, part in telling the story of his film.

His achievement will be appreciated still more by those who have first-hand knowledge of California's Mexican communities. The writer who can fill his pages with picturesque local color and the painter who can ignore that which he does not want seen on his canvas can conceal the squalor of the location, the intrinsic ugliness of wretched, ramshackle huts and shabbily-clad residents.

The man with a camera must, as a rule, picture what his lens sees, often with disillusioning fidelity. Clardy makes his camera see only the picturesque and further invests even the most commonplace scene—a rusty faucet—an abalone shell used as a soap-dish—a complacent, ruminating goat—with beauty.

From the technical viewpoint this achievement is the more remarkable since virtually the entire two-reel production is of the "candid" variety, photographed without staging, and without the knowledge of the actors. Scarcely less than 90 percent of the scenes are telephoto shots, yet such technicalities as focus, exposure, and composition—always difficult in sub-standard telephoto work—are kept in amazingly good control.

"Vida Pacoima" is one of those rare films able to tell its story completely

without titles. The two titles used—the main title and the end title—are however noteworthy examples of unique double-exposure title work.

BEYOND MANILA

Turn a capable cinematographer loose in the Philippines with an adequate supply of Kodachrome and you're almost bound to get a picture worth seeing. W. G. Hahn, of Baguio, Mountain Province, P. I., is evidently a more than ordinarily capable cinematographer, for in a year in which the contest received an unusual number of films worth seeing, and in which more than 60 percent were in Kodachrome, Hahn's entry, "Beyond Manila," was adjudged the best color film, and crowded the chief winner for top honors.

The material laid before Hahn's camera—ranging from the cheerful tillers of the rice paddies through the snappy drill of the Philippine West Point Cadets, to the barbaric "cañao" celebration of villagers less than a generation removed from head-hunting—can only be described as ready-made photographic wealth.

But to record it, as Hahn did, in a symphony of barbaric, yet not clashing colors is a distinct achievement. Long after each viewing, the judges carried vivid mental impressions of bare bronze bodies contrasted against a background of lush greenery and tropical blue skies.

Throughout nearly all the 900 feet of this film Hahn apparently benefited from processing which leaned to the warm side. But his own appreciation of lighting, composition and especially the chromatic significance of exposure, enhanced the subject-matter and made it a real achievement in color, rather than merely an interesting travelogue.

RITUAL OF THE DEAD

The scenario group this year brought out an unusual number of really excellent dramatic films. Cochran's "Phantom of Suicide Gulch" was a delightfully burlesqued "Western," showing a sound grasp of production technique.

William Mehring's "Pagliacci," while premised on an old theme and evidencing minor technical faults, showed in the performance of its principal player one of the finest bits of acting ever seen in an amateur film.

James McCarthy's "Dangerous Border," another "Western," was one of the finest examples of professionally smooth production and scenario writing we've seen in an amateur film.

But towering above these for sheer dramatic force and novelty was Richard Lyford's "Ritual of The Dead," the class winner. Melodramas—even ghost stories—are not new to amateur filming. But Lyford's film surpasses its rivals by virtue of its dramatic virility, the elaborate attention to sets and costuming, and above all by the dual performance of its maker as a callous murderer and as a 3,000-year-old mummy.

In the latter role, especially, Lyford's skill in make-up and impersonation can be compared only to such professionals as Boris Karloff and Lon Chaney.

Save in the double-exposure shots his photographic technique falls at times short of perfection, but in his capacity as director he keeps a tempo and coherence—to say nothing of horrific suspense—seldom seen in non-professional product.

His use of sound in the form of music, narration and several sequences of spoken dialog, all recorded on discs, gives audible evidence of technical skill. It may be mentioned that "Ritual of The Dead"—the first true sound film yet received in these contests—won its way through the preliminary judging solely on its merits as a silent picture.

Only in the finals did it receive the benefit of its recorded sound. While it cannot be gainsaid that the sound made the film more impressive, most of the judges felt that even without this aid "Ritual of The Dead" would have retained the place it ultimately won.

HOT WATER

A year ago, S. A. C. member Earl Cochran, of Colorado Springs, submitted a burlesqued "gay nineties" melodrama to the contest. When it failed to garner a major award he asked for a frank criticism of the film's faults. So well did he take this to heart that one of his dramatic entries this year proved a close contender for top-flight honors in its class.

But during his vacation Cochran branched out from his usual type of dramatic filming and turned his camera on the scene of his vacation—Yellowstone National Park. The resulting film, two reels of exquisite 8mm. Kodachrome, took the highest award in the scenic group, and if my memory is correct made Cochran the first member of the young and growing Society of Amateur Cinematographers to win major honors in the contest.

"Hot Water" won its place because its maker realized that a good scenic film requires more than just beautiful scenery and photography. More even than these, a successful scenic needs tempo, variety—and a pair of active shears. Cochran's film had them all.

With all due respect to the Yellowstone enthusiasts, it must be admitted that for photographic purposes, all geysers bear too great a family resemblance. So do their cousins, the hot springs and mud springs. When you've shown your audience one of each, views of other individual geysers or springs are likely to become repetitious, no matter how excellently photographed.

Cochran realized this, and also realized the boring effect so frequently given by scenics which show long sequences of closely similar "pet shots" of each scenic feature.

So he managed a slightly different treatment of each geyser, hot spring and "paint pot." He kept his sequences short and graphic; wherever more than one or two shots of a thing were required he varied his camera angles and lightings basically, almost completely avoiding repetition.

Best of all, he cut things short and sweet—telling the story and moving quickly to the next point. Many an older hand at cinefilming could benefit from studying Cochran's technique in this respect.

CHICAGO, VACATION CENTER OF THE NATION

The winner of the documentary class award, Theodore D. Shaw, of Chicago's Metro Movie Club, was another competitor who chose an ambitious subject. Compressing the diversified sights of a day in a big city like Chicago into a single reel's footage is a terrific task. Doing so without achieving the stereotyped effect of a succession of picture postals is harder.

But Shaw has done so. He has kept the impression of hustle which is the soul of Chicago, without at any time losing pictorial force. His use of angle shots is notable. In addition, his color is of consistently high quality.

Technical faults there undoubtedly are—most of them probably unavoidable. For example, several scenes could have benefited from the use of a tripod, though it may well have been impractical to use one at the time. Another scene illustrates a pitfall many Kodachromers unsuspectingly fall into: faulty color composition.

In a beautifully composed longshot of a fountain in one of the parks the viewer's eye is drawn forcefully from the center of interest by the too brilliant rendering of a green car parked in the immediate foreground.

A few feet's difference in camera position would have avoided this. Yet it is probable that, to the filmer's eye, intent on details of focus and exposure, that green flivver was not nearly as noticeable as it later proved on the screen.

Shaw's treatment, however, tends in other ways to verify the contention, often expressed here, that the best Kodachrome does not need to follow rule book practice as to lighting. His opening sequence, made along the lake shore and river front at dawn, is a pictorial gem.

Also memorable are scenes made on the shadowed side of State Street, with part of the picture in brilliant afternoon sunlight and part deeply shadowed by the adjacent buildings. Such scenes—often photographically striking in themselves—lend reality to a film in a way no perfect, flat-lighted "rule-book" scenes can.

SANTA VISITS ELAINE

Most hotly contested of any Contest classification this year or any other

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The world's greatest and best negative in every respect

EASTMAN PLUS X PANCHROMATIC

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year was the home movie award. Long after the rest of the awards were comfortably decided, the judges ran and reran two films, striving to break the apparent unbreakable tie which had "Shadow's Bones" an excellent dog picture made by Frank Gunnell of West New Brighton, N. Y., and "Santa Visits Elaine" made by John Pohl of Cicero, Illinois, in a perfect neck-and-neck photo finish.

"Santa Visits Elaine" won out by virtue of its greater production effort.

Basically the story is simple enough, told in excellent Kodachrome. Just the sort of thing any family could stage—little Elaine absorbs the Santa Claus legend, prepares for Santa's visit by being very good, Santa appears, Elaine enjoys her presents—and "The End" in an excellent title.

But Elaine's papa has in filming this story done a very excellent job of the hardest kind of direction — letting a child (especially one's own!) be really natural on the screen.

In addition to this, Pohl took advantage of a very simple camera trick to give his picture novelty. When Santa appeared, all he needed to do to move furniture out of his way was wave his arms and—presto!—the furniture vanished. In the same way, a few waves of the hand and toy stoves, velocipedes, Christmas tree, and the rest appeared in their places one after the other, in a manner most mystifying to the layman.

To the camerawise the answer is simple. At a command, Santa merely "froze" in position. The camera stopped. The furniture was moved out, and the camera restarted. Appearances of toys were done the same way; and wisely, after Santa's part in the magic was established in one or two shots, the others were shown without showing the actor. And it's really surprising how a few simple camera tricks will add general interest to the simplest home movie.

JELLO AGAIN

Every now and then a picture crops up of a type which can't well be classified. And such rule breakers are generally so well done that they can't avoid winning honors, even if a special prize has to be created for them. This year it was Carl Anderson's "Jello Again"— 150 feet of 16mm. Kodachrome in which animated Jello-cartons, transformed into engaging dwarfs, tell us about the good points of the product and how easy it is to make gelatin desserts.

Perhaps it was a good plug for Jack Benny's favorite dessert—but it was also an amazing piece of film craftsmanship, especially when done by an amateur with amateur equipment.

One hundred fifty feet of film does not sound like much. But when it is done by animation, painstakingly exposing one single frame at a time, then moving the tiny characters and exposing another, even this short footage becomes colossal.

A foot and a half of good 16mm. animation represent's a mighty good full-time day's work when one is working single-handed. Doing it as Anderson must have, in spare time and giving first attention to a job, making an animated film is a task which surpasses even Hollywood's favorite indications of gigantism.

More to the point, Anderson did his work very well. Animating three-dimensional figures, as he did, is infinitely harder than animating cartoon drawings. In drawings, one can compare successive drawings before photographing, to insure that the phases of animation are properly spaced. If a mistake is seen, an eraser and a few penciled lines will usually correct it.

But animating figures, only visual judgment can serve as a guide: the proof of the pudding does not appear until weeks later when, after painstakingly animating upward of 2,000 frames, the completed 50-foot roll comes back from the laboratory. If there are mistakes, the whole back-breaking labor must be done again.

In addition, Anderson has secured some highly interesting effects by the use of colored overall lighting. Serious Kodachromers could well apply this technique to full scale scenes where bizarre effects are wanted. I'd like, for instance, to see one of Richard Lyford's chillers Kodachromed-lit by lamps filtered with green or ghostly blue gelatins!

Scene from M.G.M.'s "Ice Follies of 1939," with Joan Crawford, James Stewart and Lew Ayres. We are promised something sensational in a photographic way in this picture. At the left the crew is shown standing on water-covered ice. Behind the camera on this picture is Oliver Marsh, A.S.C., on the ice sequences, Joseph Ruttenberg, A.S.C., on the dramatic sequences and W. Howard Greene, A.S.C., on the Technicolor sections. The subject is being directed by Reinhold Schunzel. The still was from the camera of Frankie Tanner.

Co-operation the Key to Camera Award

By GEORGE BLAISDELL

CO-OPERATION — the co-operation of director, art director and the cameraman—is the chief prerequisite to the winning of a photographic award. Disregarding any question of ability, individually or collectively, without that co-operatly an award cannot be won.

That was the summing up of Ray Rennahan, A.S.C., at the conclusion of a chat with the editor of this magazine. The Hollywood Reporter's critics' poll for the month of December had named Ernest Palmer, A.S.C., and Ray Rennahan, A.S.C., as joint winners of the photographic award for their work on Twentieth Century-Fox's "Kentucky." The last named is a staff photographer for Technicolor and the former for the production company.

Rennahan had been paying his respects to his associate on the picture—and it was not in any casual, perfunctory or matter of form fashion. It was in all earnestness and sincerity. That estimate, too, had been formed under conditions that severely test relations between two men.

One man had not made any picture other than in color in years. The other was a star in black and white, but this was his first experience with Technicolor—and he was on his home soil, where the Technicolor man was in a manner of speaking a visitor.

Serious Student

But in this instance the Technicolor man was doing the talking. "Ernie is more than a fine photographer," he declared. "He is a serious student. He wants to know. And for every question he has a suggestion—and a good one. No, Sir, that award was fifty-fifty. And it was a pleasure to be tied in with him."

But in speaking of co-operation Rennahan also had paid his respects to Dave Butler, the director of "Kentucky." The former had listed some of the factors which are "necessary evils" to the cameraman, some of the things that add to the photographic impedimenta—such as scrims, diffusers, overhead butterflies, painters for lessening hot spots on rocks, etc., in fact, all the devices

Ray Rennahan

designed to smooth over or wipe out the bad spots in a given set-up.

Frequently it happens, the cameraman explained, that the set-up called for by the script is exactly opposite from the one that photographically is indicated. He was speaking of exteriors, of course. By changing the angle a few degrees the sky and the clouds would be more advantageously brought into the field of the lens and contribute to what might be the making of a gorgeous sequence.

If they were not brought in, if the director chose to follow the script, it might mean the sacrifice of an hour or more time in bringing into play any or all of the devices intended to ameliorate harsh photographic conditions. There might be occasion for the use of many reflectors and there might be a strong wind blowing. That would mean a man on every reflector, and time might be involved in finding them.

"It is many times as hard to photograph a bad set-up as it is a good set-up," said Rennahan, "whereas if you are permitted to change an angle you get excellent results. And so it was with Dave Butler: his pride rode in the picture as it would look on the screen.

Gave Breaks to Camera

"That sentiment overbore any personal feelings he might have in compelling recognition of authority. He gave us all the breaks we asked for in selecting angles favorable to lighting conditions.

"So, too, it is with an art director. There may arise a situation in an interior where a slight shift in set-up will avoid a lot of trouble—and of course result in photographic improvement. Mind you, I am not pleading for the other factors to give away to the photographer just to save time—for the photographer.

"The director and the art director may have their own reasons for maintaining their original position, good and sufficient reasons, and it would be an unreasonable cameraman who would expect them to do otherwise. But the point I desired to make was that in creating 'Kentucky' there was all-around co-operation—between the cameramen and the camera crew and between them and the director and art director."

Varied Experience

Ray Rennahan's early experience was in black and white in the laboratory of the National Film Corporation and from that work to a spot as assistant cameraman. Then as cameraman he worked for Ben Hampton Productions, the studio of which later was taken over by United Artists, and then for Hollywood Studios, now known as General Service, and for Triangle with Harry Aitken.

In 1921 Rennahan was employed by Technicolor, which company had sent a group from Boston to Hollywood to do some research work under studio conditions. The engagement primarily was announced as for three weeks. It was then decided to do a short. The picture was to be "Toll of the Sea," and was designed to be two reels.

It looked so good to the producers that it was expanded into what was released as a five-reeler and a special feature by Metro.

Two cameramen were on the picture.

One of them, incidentally, was John Arnold, A.S.C., later for seven years president of the American Society of Cinematographers, and for many years head of the camera department of M.G.M. Arnold was the first cameraman employed on the subject, while Rennahan developed the negative. When Arnold was called back to Metro Rennahan was shoved into the breach. He finished the film and later developed it and sent it on to Boston.

Grossed $250,000

Doctor Kalmus, president of Technicolor, in an address last fall before the Society of Motion Picture Engineers stated the picture was manufactured in the original plant in Brookline avenue at a cost of 27 cents a foot. The subject, which was the first Technicolor to be produced by the subtractive method, grossed over $250,000. The doctor also mentioned that every step of the production work was closely followed by executives in the industry, so marked was the interest.

There was another black and white engagement after the Technicolor laboratory was closed, but it was a short one, however. Just following its unexpected folding there came an even more unexpected wire from Technicolor to come on to New York. There was ready compliance.

From New York he moved on to Boston to work in the Technicolor plant. Following a short stay there Rennahan was ordered to join the company being formed to go to Hollywood, in which town headquarters were established in the National Studios. The first assignment there was the color work at Gaudelupe on "The Ten Commandments."

The first full color subject was "Wanderer of the Wasteland," featuring Billy Dove, Noah Berry and Jack Holt. It was a success on its release in July of 1924, and materially contributed to the rating of the players.

Research on Three Color

Along in 1929, at the time of the shift to sound pictures, Technicolor had the largest camera department of any company in the world. The depression's influence was added to the more unsettled condition produced by the change to sound. While there were not many features being produced there were a goodly number of musicals and other shorts.

While the two-color process was being used in all Technicolor subjects the research department was steadily at work on three colors. Finally the present three-color camera was designed and put into shape for testing. A majority of the first subjects were of cartoons.

Then entered Jock Whitney with his 2200-foot "La Cucuracha," which proved a great success—in fact, possibly aside from "Three Little Pigs," scoring the largest number of runnings, in some cases six to eight performances a day being recorded.

It was demonstrated that production in three colors was as practical as in two colors with perhaps the only handicap being in color fluctuation and flicker coming from the arcs then in use. This was remedied by new devices provided by Mole-Richardson. Other inventions coming along have contributed still further to establishing Technicolor lighting on a level with black and white.

Perhaps Rennahan's most novel experience in the making of color pictures came when in 1936 he went to England to make "Wings of the Morning" at the Denham Studio. It was the first three-color subject to be filmed in that country. The cameraman was quite alone so far as experience in three color or any color was concerned.

Gorgeous Irish Grass

That applied to the director, to the remainder of the camera crew, the art director, and to the men in the electrical department, who incidentally were acquainted exclusively with incandescent and not with carbon lamps. In fact, Mrs. Kalmus was the only person present on the staff other than the cameraman who knew color. The picture, too, had been made on a black and white schedule inasmuch as when it was drafted there had been in the studio no one who was acquainted with color.

The picture had been shot for exteriors in England and Ireland. Asked about the greens he had found in Ireland the cameraman waxed enthusiastic.

"Gorgeous," was the enthusiastic response, "and so luminous. Of course, it would be that way because of the amount of moisture and water. Then there is a soft light, due to the prevalent haze. Sometimes the light is too soft.

"How did the picture turn out? Now that you are asking me I shall have to tell you personally I thought it was swell. It proved to be one of the biggest money-makers of the year in England. While it did not do so much in this country it was well received.

"But it all went to prove that after all real co-operation, and I had real co-operation on 'Wings of the Morning,' will overcome handicaps that some might classify as practically insuperable."

Palmer Tells of Experiences Shooting Technicolor

MANY black and white cameramen look with some and others with considerable concern upon any immediate prospect of working on a color picture, on a three color picture to be more precise, and to be quite exact on a Technicolor subject. So mused Ernest Palmer, A.S.C., on a late afternoon in late January. The remark was passed in a casual, matter-of-fact way. There then appeared a noticeable twinkle in those usually serious eyes of his.

"But if their experience parallels mine on 'Kentucky' for Twentieth Century-Fox they should save some of that concern for use on their first assignment on black and white following their experience in color. That is especially true if their case is like mine, wherein I stepped from 'Kentucky' right back into a black and white subject. But if the jolt seem pretty rough there is one real consolation—it is for but a very brief time. They will find themselves quickly again in their old stride."

Palmer had been telling of his experiences in the making of "Kentucky," his first assignment in Technicolor. As was noted in the story about Ray Rennahan, his Technicolor associate on the picture, there is an unusual situation in the making of a color film for a major company.

To restate that situation, Palmer was

assigned by Twentieth Century-Fox to be responsible for the subject's production, with that responsibility resting on his shoulders. Yet as a matter of fact, outside of his work with Kodachrome and in two-color film he was unacquainted with the mass of details that flow along with a three-color Technicolor subject.

Regular Happening

He realized there hardly was a month or week when a similar situation does not arise in the studios clustered about Hollywood. Naturally after a quarter century behind a professional studio camera he wanted the best product obtainable. To guarantee as close an approach to that end as was possible he decided to go to Technicolor and seek to acquire as much information as was possible before the beginning of shooting.

Palmer chose to go to the tops in the way of authority on the camera work of Technicolor. He sought out George Cave, manager of the camera department, and Robert Riley, his chief aid. First in the Twentieth Century-Fox man's mind was the identity of the man who was to be assigned to the picture by Technicolor. He was asked if Ray Rennahan would be all right with him.

Assurance was prompt and hearty that nothing could be finer. There were many consultations with one or all of the three men, with advice as to what to do and what not to do. As a result there was a much different outlook on Palmer's part when it came time to undertake actual shooting.

Told what Rennahan had said regarding the co-operation that was evident all through the making of the picture Palmer was agreed the remarks were absolutely true. He said if personally he had erred in judgment Rennahan was quick to set him right. And when told Rennahan had praised the co-operation of Director Dave Butler again the reply was in affirmation.

Palmer remarked it had been his good fortune to have photographed perhaps one-half or two-thirds of the pictures Butler had directed and he had found Butler always thought first of the picture and afterward of himself.

Borzage Tips Butler

Palmer recalled that when Fox made "Seventh Heaven" in 1926-7 under the direction of Frank Borzage the part of Goban, the street sweeper, was most competently played by Butler—so competently, in fact, that Borzage during the course of the filming by Palmer had asked of Butler: "Why don't you direct?"

It was shortly after that Butler accepted the suggestion of Borzage. He began directing; and usually Palmer was with him.

Another factor which contributed to the success of "Kentucky" in winning the Hollywood Reporter's critics' poll was the excellence of the process shots by Solly Halperin, A.S.C., and of these there were many. Here again Messrs. Cave and Riley were of inestimable

Ernest Palmer

assistance in giving the benefit of the information Technicolor had acquired in the process field.

Another point Palmer had noted in the way of contrast between black and white work and in the field of color is that where in the former the cameraman in lighting concentrates more on the people on a set and the background more or less is secondary it is different in shooting color.

In the latter case the background must not be secondary. In many instances bringing out the color in the background, bringing out the beauty of the setting, materially enhances the appearance of the players.

"If you would give your players the advantage of color you must be careful of your lighting," declared Palmer.

The cinematographer's first camera work was with the old Imp company in New York. The Imp, so called because its full name was Independent Moving Pictures, was the company which marked the entrance of Carl Laemmle into the production side of the industry. So also was it the father of Universal.

Making "Ivanhoe" in Wales

Its studio was in Eleventh avenue in New York City. In it many players since well known had their introduction to the motion picture public. With the company that went abroad to make "Ivanhoe," under the direction of Herbert Brenon and the players of which were headed by King Baggot, Palmer accompanied as cameraman. It was one of the first of the American companies to go abroad.

Singularly enough, "Ivanhoe" was not photographed in Scotland but in Wales, in New Chepstowe castle. It was in England that Palmer met George Loane Tucker, for whom later at the Brunton Studios in Hollywood he photographed the famous "Miracle Man."

One of the larger subjects Palmer has made in more recent years was "Cavalcade," directed by Frank Lloyd. This picture, in spite of its size and importance, was made in a comparatively short time, or on a short schedule. This achievement was due, the cameraman explained, to the thoroughness of the director in preparation, to his knowledge of English life and customs and manners, and to his real enthusiasm for the story—an enthusiasm that might be translated into inspiration.

Herein Ernie Palmer undoubtedly has laid down the best analysis of why "Cavalcade" was voted in 1934 by the Academy membership the best production, the best directed picture and the subject that stood highest in the art direction. And it was the period in which the Academy had extended its stated award term to December 31, thereby lengthening that year from the usual twelve to fourteen months.

So it is simpler to win as it must be more difficult to lose when the director is a hound for preparation, for being before the start all set in his own mind what every sequence shall contain and the order in which it shall be presented; to know the background of the story as well as the traditions and feelings of the men and women who people it; to inspire his crew and players with his own enthusiasm.

Tony Gaudio Honored

WORD has been received in Los Angeles by the Italian Consulate that Tony Gaudio, A.S.C., has been named by King Victor Emmanuel III a cavaliere of the Crown of Italy. The cameraman has been in the United States since 1908, and has in the intervening years photographed many of the well known American players.

Two years ago Gaudio was awarded photographic honors by the Academy for work with his camera on "Anthony Adverse." Just to indicate that in his riper years he is still among the tops it may be said that in the Hollywood Critics' poll for December releases he was awarded the highest vote among the straight black and white photographers for his camera work on "Dawn Patrol." There were two pictures that came in ahead of him, but they were both in Technicolor. The Academy restricts its awards to black and white subjects.

Willoughby's, 110 West Thirty-second street, New York, has been appointed distributors for the Miller Fold-O-Flector Junior and the Iras adjustable lens shade and filter holder.

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LIGHTING THE NEW FAST FILMS

FAST FILM is unquestionably the technical topic of the day. The recent introduction of two sensationally faster production-type emulsions—Agfa's "Supreme" and Eastman's "Plus X"—offered cinematographers a revolutionarily improved material upon which to work. At the same time, the tremendously increased speed of the new films—fully twice that of previous films—gave rise to new problems in putting these emulsions to practical use.

A basically important aspect of the problem is lighting. The new emulsions require far less light to give a normal exposure. How, then, shall this reduction in exposure be accomplished? In theory, several methods present themselves: which is the most practical? In addition, what detail differences in lighting technique for the old and new films may exist to trap the unwary newcomer to plus-speed filming?

Since the new films are only just finding their way into general use, there are many who have not as yet had an opportunity to find for themselves the answers to all of these questions. From among those members of the A.S.C. who have actually used the new films on production the following opinions have been gathered in the hope that they will in some measure make things easier for others, here and elsewhere, who are just beginning their personal use of these newest cinematerials.

"Cafe Society" First on "Plus X"

TEDDY TETZLAFF, A.S.C., is understood to hold the honor of being the first to expose the new Eastman product on actual production, using it in filming Paramount's "Cafe Society." He says, "Changing to Plus X I have simply reduced the average intensity of my lighting between 35 and 40 per cent." He continued:

This is a relatively simple matter. Actually, the electrical department did much of it for me by fitting smaller globes in my lamps, replacing the usual 2000-watt globes in 18s and Juniors with 1000-watt ones, and in the larger units replacing 5000-watt globes with 2-kws.

Some of the smaller units—"broads," "rifles" and the like—cannot well be fitted with smaller globes as they are designed expressly for the 1000-watt PS52 globe. (A 750-watt PS52 globe of the same dimensions is now available.—ED.) These lamps are therefore either used with more diffusion or moved farther back.

The big thing to remember in changing films and making such a reduction in lighting is that in changing the intensity of the lighting, the balance must not be changed. Don't, for instance, make all the reduction in your highlight levels, or in your shadow levels; if you do, the balance as a whole will be thrown out of key.

The results will naturally not be good photography, and you will find yourself blaming the film instead of yourself for what is really a mistake in lighting.

For the rest, don't become too overawed at the changed speed of the new film. Take it in your stride! If, as is sometimes necessary, you have to change films with too little opportunity for making advance tests, change your lighting gradually, making the obvious reductions at first, keeping your balance normal, and let further changes come later, as you get better accustomed to the film and the new, low illumination levels.

Watch Highlights

WILLIAM MELLOR, A.S.C.: I've had the experience of using both the Eastman and Agfa fast films and my experience agrees with Tetzlaff's. The most important thing to keep in mind when changing from conventional to fast film is the importance of a normal lighting balance. Keep that, and exploring the possibilities of the new film is a real pleasure.

Using ordinary film we know there must be a definite relationship between the most intense highlight and the deepest shadow. With the new fast films this is more important than ever. There is apparently less latitude to protect you.

The film technical experts tell me this is due to a combination of a slightly sharper break in the shoulder of the H. & D. curve and the changed printing quality of the far finer grained negative.

In practical terms, it means—watch your highlights! With the older film highlights could often be lit quite a bit too "hot" without seriously affecting the quality of the print. With the new film, let them grow just a little bit too "hot" and they "burn up." In the old days there used to be a saying, "Expose for the shadows, and the highlights will take care of themselves."

With the new film, we've got to turn that statement around. Today we must watch our highlights—and the shadows can pretty well take care of themselves.

Aside from this, lighting is still lighting, even if done in a lower key. In general, use smaller globes than usual. In the floor units, either use smaller units or, if you prefer, move standard units farther back and diffuse a bit more. Then forget about film speeds and reduced lighting levels, and go ahead and balance these elements in your accustomed way."

Lighting With "Baby Juniors"

ARTHUR EDESON, A.S.C.: I've just finished a picture on Plus X. The new film made me work harder than ever before—but the results on the screen are worth it.

The whole thing can be summed up in a nutshell by saying that the secret of using the new film is keeping your lighting balance normal even though you have less light to balance.

I've reduced my lighting level largely by using smaller globes and smaller lamps. So far it seems impractical to use fewer lamps, for lighting balance depends on the angles of light as well as intensity. And we've still got to keep our established number of lighting angles for any scene, whether or not a high degree of illumination comes from each source.

Personally, I've been lighting my sets largely with Baby Juniors and baby spots modernized with Fresnel lenses. The speed of the new film is such that it is uncanny what can be done with these tiny 500-watt units. And of course where larger units are necessary, Juniors and 18s fitted with 1000-watt globes instead of the usual 2-kw ones do the trick.

If you can just remember to keep your lighting normally balanced, regardless of the reduction in overall intensity, you'll find that the increased speed of Plus X is only part of the story. The real thing is improved photographic quality in every respect. That, rather than mere speed, is what makes the new film such a tremendous improvement!

Easier to Separate Planes

L. WILLIAM O'CONNELL, A.S.C.: Lighting is easier with the new film than with the old. The film itself now does half the work of separating the different planes of your picture. People stand out more clearly from their backgrounds. Even separating the planes in close shots

—the little matter of keeping a coat-lapel from blending into the background of the garment—of giving an illusion of depth to faces and figures—is easier with the new film.

Far less backlighting is needed. The film itself does half the work blacklighting used to do. As a result, we get more natural-looking pictures.

GAETANO GAUDIO, A.S.C.: It was one of the luckiest things that ever happened for me that Plus X came out when it did. I was just about to start "Juarez" —one of Warner Brothers' biggest films. It seemed just made for the new film—highly pictorial, and all through it called for dramatic, low-key lighting effects. I had just enough time to test the new film adequately and then step right into production with it.

I'm getting more beautiful results with this new film than I ever got before on any film. I don't think I ever received so many compliments on "rushes" before.

Lighting the new film, you've got to be sure of balance—but you can do what all of us have for years wanted to do: you can come down to almost natural lighting levels. And in low-key shadows where on the old film you saw just a heavy mass of black graininess, now you see a real shadow.

A good meter, like the General Electric, is a big help in keeping your lighting balanced. On most shots, I keep my key light at about 50 foot-candles. On the old film, I'd have had to use 150 or 200!

New Fluorescent Light

This means smaller, lower-powered units. With the old film, I'd use, say, a Junior for my keylight, and fill in with Baby Juniors. Now I use Baby Juniors for my keylight! Those lamps and the new film were just made for each other! In fact, the smooth beams of all those Fresnel-lensed Solarspots are ideal for the new film, because they don't give you any "hot spots" or shadows to worry about.

The electrical department has rigged my sets with the usual 18s and Juniors, all equipped with half-sized globes for the new film. But even in the long shots I haven't had to use but about a third of the units available. In the closer shots I'll have perhaps one or two overhead spots in use, and do the rest of my lighting with Baby Juniors and heavily-silked broads on the stage floor. On low-roofed stages I've had to turn out the ceiling work lamps when I was shooting.

Using these smaller units its easier to put the light just where you want it. Doing it with baby spotlights you can get your lamps into places where they'll do the most good—even in cramped quarters where you could never put a bigger lamp.

We've developed a marvelous new lamp for giving a soft front-lighting on close-ups of women. It is a fluorescent-tube lamp that looks something like the old Cooper-Hewitt tubes we used years ago, but much smaller. It employs a new fluorescent mercury vapor tube developed by General Electric, intended originally for house lighting. It gives a very soft blue-white light.

Used for a front light for faces it is wonderful how it irons out wrinkles. The tube is big enough—about two feet long and two tubes are used in each lamp—so that the lighting seems to come from all directions—front, top, sides and underneath—giving a perfect, shadowless foundation light.

These tubes couldn't be used with the old film. They are rated at only 20 watts: they don't give enough light to pick up on ordinary emulsion! But they are perfect for the new fast films.

Build From the Shadows

THEODOR SPARKUHL, A.S.C. (just commencing "Beau Geste"): Since I'm only beginning my first picture on the new film I don't feel I can say much about its use.

But it seems logical to me that it may change our method of lighting back to something like those we used some years ago. That is, first lay down a foundation of soft general lighting, and build up the halftones and highlights from this rather than the other way around.

VICTOR MILNER, A.S.C.: The new fast film is without doubt the most important photographic advancement in a long time. The cinematographer has to be far more alert using the new film—in making "Union Pacific" I've worked harder than ever before in my life—but the results on the screen, in terms of better, more expressive photography, are worth it.

But I think that if we limit our thinking about the new film to the relatively simple fact that we can use less light we are missing half the possibilities of the new emulsions.

Flexible Technique

We've got a film which needs less light for an exposure. Using smaller globes to put less light on the set is only one way of putting this quality to work.

With the ordinary film we developed a technique of altering the key of our lighting to match the dramatic mood of the action. With the new film we can add to this idea, making the camera more expressive than ever.

For instance, the other day I had a scene in an old-time western saloon and dance hall. It was a big set, bright and full of picturesque action.

Using the new film, that scene could have been lit with half the light I actually used. But instead, I used what would be about a normal lighting for the old film—and compensated by stopping down my lens. That way I gained in depth and crispness in a way that enhanced the mood of the shot.

At other times, I felt it best to lower my lighting level and keep my lens rather well open. This gave me softness and a naturalness better suited to that particular action.

And when the action calls for such things the possibilities of the new film for effect lightings seem endless.

For this reason I feel that any attempt to set down rigid rules for lighting the new film is wrong. It can close our eyes to opportunities the new film offers for making camerawork more expressive.

We've always prided ourselves on the thought that cinematography is as expressive a medium as a great orchestra. This new film widens that expressiveness. It makes it possible for us to run the scale between extremely soft, naturalesque low-level lightings (50 foot-candles or less), shot with full lens apertures, to the opposite extreme of higher-level illumination (perhaps as high as 200 foot-candles or more) exposed at greatly reduced apertures for a new and greater depth and crispness.

But we must keep ourselves mentally free to use these opportunities to the full, playing each scene visually for its best dramatic values.

50 Foot-Candle Level

CHARLES ROSHER, A.S.C. (working on a large, stage-built exterior set for Warners' "Hell's Kitchen"): Just look around you, if you think this new film isn't fast. This is lit for a full daylight effect: but the highest light intensity is only 50 foot-candles by my G.E. meter. It comes from that H. I. Arc spotlight over there—nearly 100 feet away. With the old film it wouldn't pick up. With Plus X it will do so strongly. The rest of the lighting graduates downward from this 50 foot-candle level.

Working at these low levels, a meter is a tremendous help in checking the fine distinctions in illumination between highlights, halftones and shadows.

I've noticed one little detail which should be watched in using Plus X. Greater care must be used on "goboing off" lamps. If they are not shielded carefully, stray rays which in the past could be ignored will have a visible effect on the new, faster film.

For instance, you see that "sky pan" illuminating the backing at the side, 35 or 40 feet from the action? Light escaping around its reflector is definitely helping illuminate the players down here. On small sets, the lighting units used must be much more selective, and better shielded, than before.

The increased speed of the film must be watched if you are working with people with ruddy or florid complexions. It accentuates those red tones. Grant Mitchell, who is playing in this film, has worked successfully without make-up in many films I've photographed. But in this one, due to the way the new film accentuates his natural coloring, he is wearing make-up for the first time.

All of these things are of course details. But speaking more broadly, this new film, if one is alert and utilizes not only the film but the improvements available in modern meters, lighting equipment and so forth, opens up the way to a lasting improvement in cinematography.

EDITING ODD FOOTAGE

By Ormal I. Sprungman

Photographs by the writer (and his 16mm. frame enlargements from "Hellroarin' Heaven," using Eastman 16mm. frame enlarger).

HEAVEN forbid that this person should ever be found filming among the angels, yet this—believe it or not—is the inside story of "Hellroarin' Heaven." This is how it was conceived from the vaguest idea, grew out of a spasm of odds and ends filming, and finally blossomed forth as an allegedly pretty 400-foot 16mm. Kodachrome reel, synchronized with lump-in-throat music.

Perhaps a play-by-play review of the film from start to finish might reveal possibilities for revamping or re-editing odd footage from your personal library into longer features holding much greater audience appeal.

In fact, if you have been led to believe that continuity is everything in home movies, you may be surprised to learn of the miraculous changes which may be wrought over a splicing block.

"Hellroarin' Heaven" was no less than two years in the offing. This does not mean that it required this lengthy interval for the actual filming and editing. But it did take every last minute for the writer to decide what this film finally was going to turn out to be. Even at that, this thing isn't final. Any minute now I might swing off on another tangent.

THAT Sort of Film

One member of the audience attending a preview of the film couldn't quite decide whether I'd been dropped when I was a baby or whether I had just plumb bumped my head against a wall. It is *that* sort of film. It is probably the most serious outdoor thing I have ever attempted.

An ardent admirer of Joyce Kilmer's poem "Trees" and the tune of similar name, I first fumbled with the idea of synchronizing color footage of trees and clouds to this mellowy music. Selecting a spring day when the sky was billowing with cloud puffs, I tried framing scenics under droopy branches or shooting vertically through tree tops.

I caught the flutter of a lone oak leaf against a cloud background. Even the rapid movement of the clouds themselves was indeed fascinating.

Although I had my tree-and-cloud footage well in hand, somehow I never did get around to purchasing the necessary recording.

Then hell broke loose in the upper Mississippi, and floodwaters started sprawling all over the landscape. North of here water was running eight feet over our much-prized smallmouth bass fishing holes. Logs and other debris were coasting downstream over the muddiest of rivers.

It was a busy week for filming. I took colored long shots of the swollen waters, closeups of choked channels and midget dribblings.

Realism Indeed

The lapping of water against half-submerged tree trunks, near shots of weed tangles in midstream, and long shots of the silvery surface through sagging willows added realism to the river reel.

When I sat down to edit this footage I hit upon a better idea. Why not cut up the river scenes, splice in a sprinkling of the salvaged cloud-and-tree stuff, and turn out a new film synchronized to "Ol' Man River," or one of the other "Show Boat" recordings?

For hours I listened to different recordings. One had too much vocal; another was weak instrumentally. And so the river footage also was temporarily shelved.

Then one day last summer my car wheels were pointed toward a setting sun, and when I finally came to a stop, a thousand miles distant, I was in western Montana, and there was a pack trip in the offing. No ordinary pack trip, this. We took five horses, no guides.

The two of us had enough grub on our five-day jaunt to last us a month. We struck out for Hellroarin' country, one of Montana's wildest and most beautiful sections of timber, located up in Yellowstone's attic.

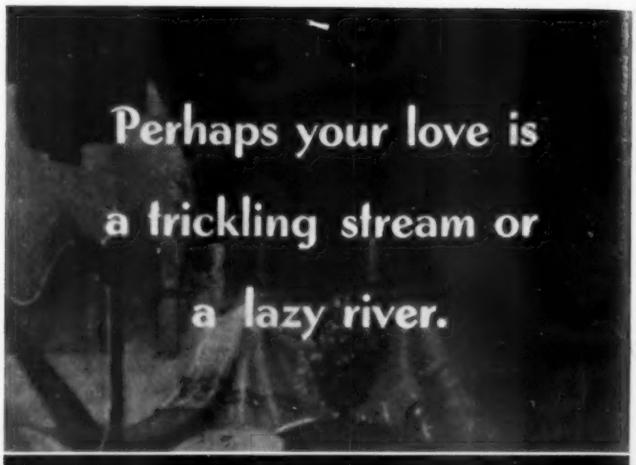
When we came to rest, we were raft-drifting and fly-casting a mountain lake lousy with trout.

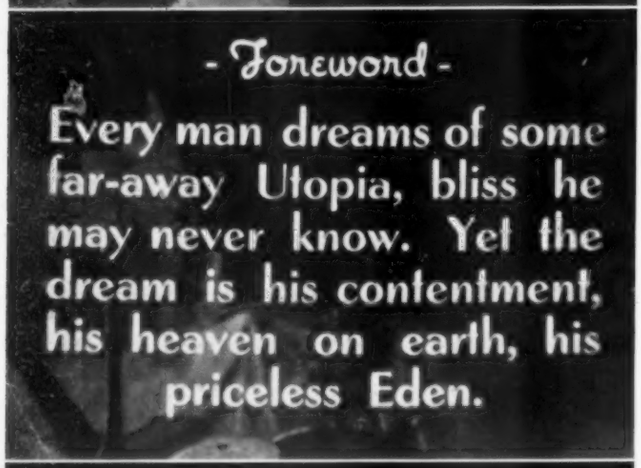
Mare Hogs Camera

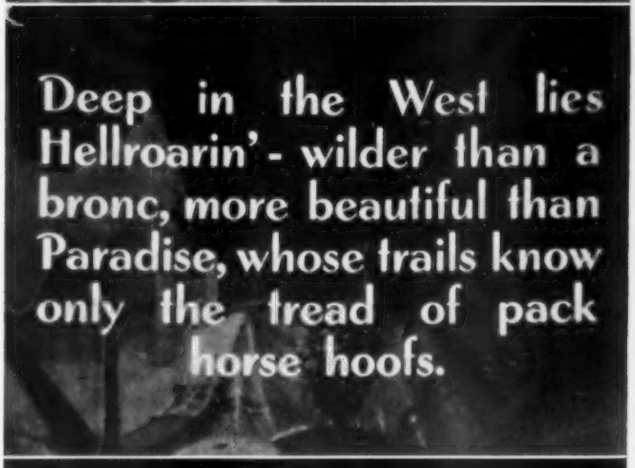
Anybody who has ever wet a fly knows how hard it is to put aside the rod and pick up the movie camera when the whoppers are biting to right and left. Any pack-tripper who has ever climbed aboard a horse knows the difficulty of either shooting movies from atop the critter or dismounting or riding far enough ahead to take shots of the approaching pack train.

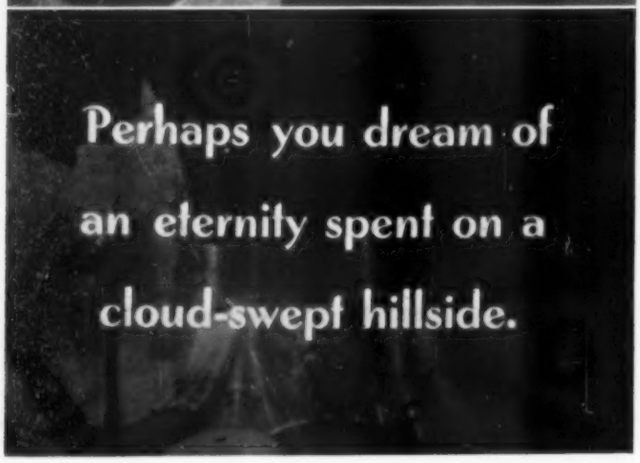
On our trip we had an old mare who was so camera conscious she would freeze in her tracks and hold up the whole parade whenever I unpackaged my camera.

Consequently, much of my shooting was reduced to more or less experimental scenes which fit the continuity, featuring completely backlighted views, close-ups showing the play of rippled water reflected by sunlight on the face of my fellow angler, long




- Foreword -
Every man dreams of some
far-away Utopia, bliss he
may never know. Yet the
dream is his contentment,
his heaven on earth, his
priceless Eden.


Deep in the West lies
Hellroarin' - wilder than a
bronc, more beautiful than
Paradise, whose trails know
only the tread of pack
horse hoofs.



Examples of Ormal I. Sprungman's titles in and

and scenes from his "Hellroarin' Heaven" (See Page 71)

shots of our pack train reflected in the water itself. It was a nice idea, but 200 feet of color film covering fishing and packing is just a teaser for any sportsman audience. So the western footage lay dormant.

In came scatter-gun season, with ducks breezing down out of the north to provide new action. One day, while hiding under some willow shoots on a private duck pass owned by Bill Everett, Minneapolis Cine Club president, and wondering why redheads and canvasbacks were so infernally immune to number four shot even at close range, an idea struck me for tying all these scenes to a common thread. I was so excited, I missed the next dozen birds. I could hardly wait to lay hands on my cold storage reels.

Film Now Complete

I did manage to shoot a duck sequence, however, showing a hunter silhouetted before a red sky in early morning, and a ground view closeup of the hunter calling birds from the blind. As he rises to point his blunderbuss skyward as a flock goes over, a singleton falls. A dog plops out in the water and retrieves the bird (this scene was staged), and so endeth the sequence.

Before me now lay a reel on trees and clouds, another on the river, a third on pack-tripping, and a fourth on ducks.

Suppose we place the pack-tripping last and the ducks in third position. Since we like the Hellroarin' country, we shall call the piece "Hellroarin' Heaven," building up to a climax by properly manipulating the other scenes with the needed titles.

After the main title and credit line, I wanted an introduction or foreword, something to tie the loose ends together, something moody that might inspire or impress. After hours of perspiring thought here is what came out of it:

—Foreword—

Every man dreams of some far-away Utopia, bliss he may never know. Yet the dream is his contentment, his heaven on earth, his priceless Eden.

(Dissolve)

Perhaps you dream of an eternity spent on a cloud-swept hillside.

(Fadeout)

Enter, cloud and tree footage. When this is completed turn to the next title:

Perhaps your love is a trickling stream or a lazy river.

Cut in all river footage, then—

Perhaps the early morning swish of wings is sweet music to your ears.

Now for the duck scenes. Up to this point we have staged a build-up to prepare our audience for the supposedly finer footage which is to follow. So we introduce our next title—and all titles are double-exposed against a harp background—with an appropriately long fadein:

Deep in the West lies Hellroarin'—wilder than a bronc, more beautiful than Paradise, whose trails know only the tread of packhorse hoofs.

Following the fade, our first shot is a long view of the mountain pass over which we shall ride, then a slow panoram down to the moving pack train. This is interspersed with close-ups of movement and pauses along the trail.

Instead of taking just a head-on closeup of a trail sign to show mileage and direction I tried an angle shot with my fellow-rider completely obliterating the sign with his silhouette as he passes before the camera.

After a down-the-trail shot of the fish-swamped lake I swung to a close-up of a fly box being opened and a lure removed. Next, a framed scene of the lake itself, panoraming slowly down to a medium shot of a log raft which my partner is pushing out from shore.

Then follows fish action aplenty, and finally several specimens are cleaned for the evening meal. This leads naturally right into the fry pan close-up of the browning steaks, but no scenes of devouring the meal are shown.

Next, the horses are saddled and the jaunt continues deeper into the woods. These scenes are staged. Another title is needed here to prove our fondness for the country and to carry out the dream motif:

In this primitive Hellroarin' heaven, here lies my dream.

The closing scenes show our pack train fording a stream. As the horses continue along water edge, pausing only to fetch a sip, the camera records the upside-down movement in the calm reflection, and then fades out.

With the modern trend in moviemaking these color films needed music—sad, slow-tempo stuff in keeping with the theme. Organ music is always tops for color movies. With vibraphone and guitar, the combination is unbeatable.

The Paradise Island Trio, recording for Decca, coincidentally had produced exactly the discs required. With the screening of the trees scenics, "Paradise" is played. "Drowsy Waters" fits the mood of the river footage, while "My Isle of Golden Dreams" and "Springtime in the Rockies" provide the sweet-sounding finale.

If I wish to add sound effects I find that the Speedy-Q and Gennett Record people of Los Angeles, Calif., sell ten-inch discs of natural wind sounds, babbling brooks, quacking ducks, crackling flames, frying bacon, and horses hoofs over gravel.

In fact, with everything in perfect synchronization, it is possible to produce a screening even more impressive than the original scene photographed.

Perhaps you have odd footage lying around which might easily be tied up into a neat, inviting cine bundle. All you need is a good strong continuity thread to make the package secure.

A REVOLUTION
— in Theater Projection

National Carbon Company, Inc. has revolutionized motion picture projection through steady improvement in projection light sources.

You cannot afford to retain 1928 standards of theater illumination. Ask your dealer about the economy, low cost and box office value of Simplified High Intensity projection.

1918

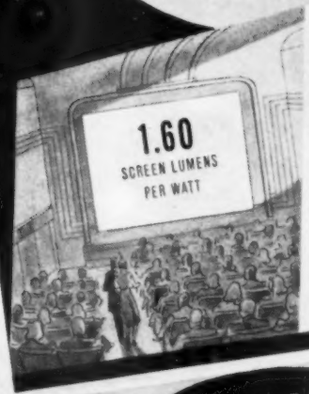
"National" Low Intensity Carbons for Condenser Type Low Intensity Lamps

0.10 screen lumens per watt. Theaters very dark. Patrons groped blindly for seats. Definitely yellow light.

1928

"National" SRA Carbons for Reflector Type Low Intensity Lamps

0.63 screen lumens per watt. Theaters still too dark for safety and comfort. Whiter light but yellowish tint.



1938

Simplified High Intensity projection with "National" "Suprex" Carbons 1.60 screen lumens per watt. Safe and comfortable general illumination. SNOW WHITE LIGHT.

THE STUDIO PROFITS

The studio, as well as the theater, profits from the revolutionary improvement in motion picture projection over the past two decades. The studio can profit further by adopting the new carbon arc lamps developed especially for motion picture production.

NATIONAL CARBON COMPANY, INC.

SIMPLIFIED
High Intensity
PROJECTION

ECONOMICAL AND MODERN

WITH "NATIONAL" "SUPREX" CARBONS

NATIONAL CARBON COMPANY, INC.
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PHOTOPHONE SOUNDHEADS PROVIDE STUDIO PRESENCE

SIX Photophone sound reproducing systems, which incorporate more than a score of new technical advances, have been announced by Harry L. Sommerer, RCA Photophone head. Tone quality that imparts "studio presence" to the reproduction, greater convenience of operation and streamlined functional design are some of the improvements ascribed to the new equipments, which are the culmination of over a decade of research and development in the RCA laboratories.

The new equipments have been designed to fit the sound requirements of every size and type of theatre, ranging from the super-theatres exemplified by the Radio City Music Hall down to the smallest neighborhood house.

To Photophone's famed Rotary Stabilizer has been added a shockproof drive mechanism; together they insure perfectly constant film speed past the reproducing photoelectric cell to eliminate any possibility of distortion from this source.

A double exciter lamp unit provides an emergency spare lamp for instantaneous changeover in case of failure. The optical focuser on the new equipments are securely locked into place after adjustment. Gear failures are virtually eliminated by an integral gear box assembly built into the new soundheads which keeps gears running in an oil bath.

Strides in Design

All housings for the soundhead, amplifier racks and volume control box have been completely restyled by John Vassos and Lynn Brodton, famous industrial designers, who have achieved a new functional streamlining which not only improves the appearance of the equipments tremendously but assures the utmost utility of every component.

"The design of sound equipment has made tremendous strides since the early talkie days, when reproducers cost tens of thousands of dollars," Mr. Sommerer said. "Vastly more efficient reproducing equipment is now available at a fraction of former costs.

"In the interim, too, the theatre exhibitor has learned to evaluate the importance of good, realistic sound in getting the most entertainment value out of a picture. He has also come to appreciate the economy of sound equipment that gives uninterrupted day-to-day service.

"The quality built into the new Photophone sound equipments is of two kinds: The kind that is immediately apparent to the ear and the eye through outstanding performance and appearance; and the kind that is built into the apparatus to give dependable, trouble-free service over its full life."

Film Speed Constancy

For theatres of up to 800 seats, Model 138, is $1375; for theatres of up to 1200 seats, Model 139, is $1650; for up to 1800 seats, Model 140, is $2250; for up to 2600 seats, Model 141, is $2850; for up to 3800 seats, Model 142, is $3375; and for houses up to 7000 seats, Model 143, is $3800.

"The shock-proof drive for the constant-speed sprocket shaft is the most important improvement to come out of the Photophone laboratory since the stabilizer unit itself," said Mr. Sommerer. "It makes it impossible for gear-backlash to be transmitted to the constant-speed film sprocket, thus insuring absolute constancy of film speed."

The shock-proof drive mechanism is mounted in the new type of integral gear box in such a way that it can be removed easily as a unit for servicing or replacement. The sound bracket assembly, including the optical system and the drum shaft, can also be removed in one piece.

An improvement which will meet with the approval of every projectionist and theatre owner is the double exciter lamp. If one light fails, it is only necessary to turn the socket around, and the spare bulb goes into operation immediately, while the burned out one can be renewed as the show continues.

Mr. Sommerer pointed to the new self-locking focal adjustment mechanism as a long step toward improved operation. A light shield in front of the optical system avoids "96-cycle" hum resulting from modulation of the sprocket holes in the film. A new type of pre-focused exciter lamp bulb has been utilized, doing away with the necessity for adjusting the lamp laterally.

Smartly Styled Housing

The new soundhead has a smartly styled housing over the electric driving motor, giving the equipment a clean-cut appearance never before achieved. This cover, like all the others on each piece of equipment, is easily removed for inspection or servicing.

On the right side of the soundhead is a glass window which permits a view of the interior. It is illuminated

(Continued on Page 86)

1—The famous RCA Rotary Stabilizer which is an integral part of every RCA Photophone soundhead. Its efficiency has been increased still further in the six new Photophone sound reproducing systems, by the use of a new shock-proof driving mechanism, which isolates the stabilizer itself from all vibration or gear back-lash. Film flows smoothly and steadily past the light source, insuring faithful reproduction.

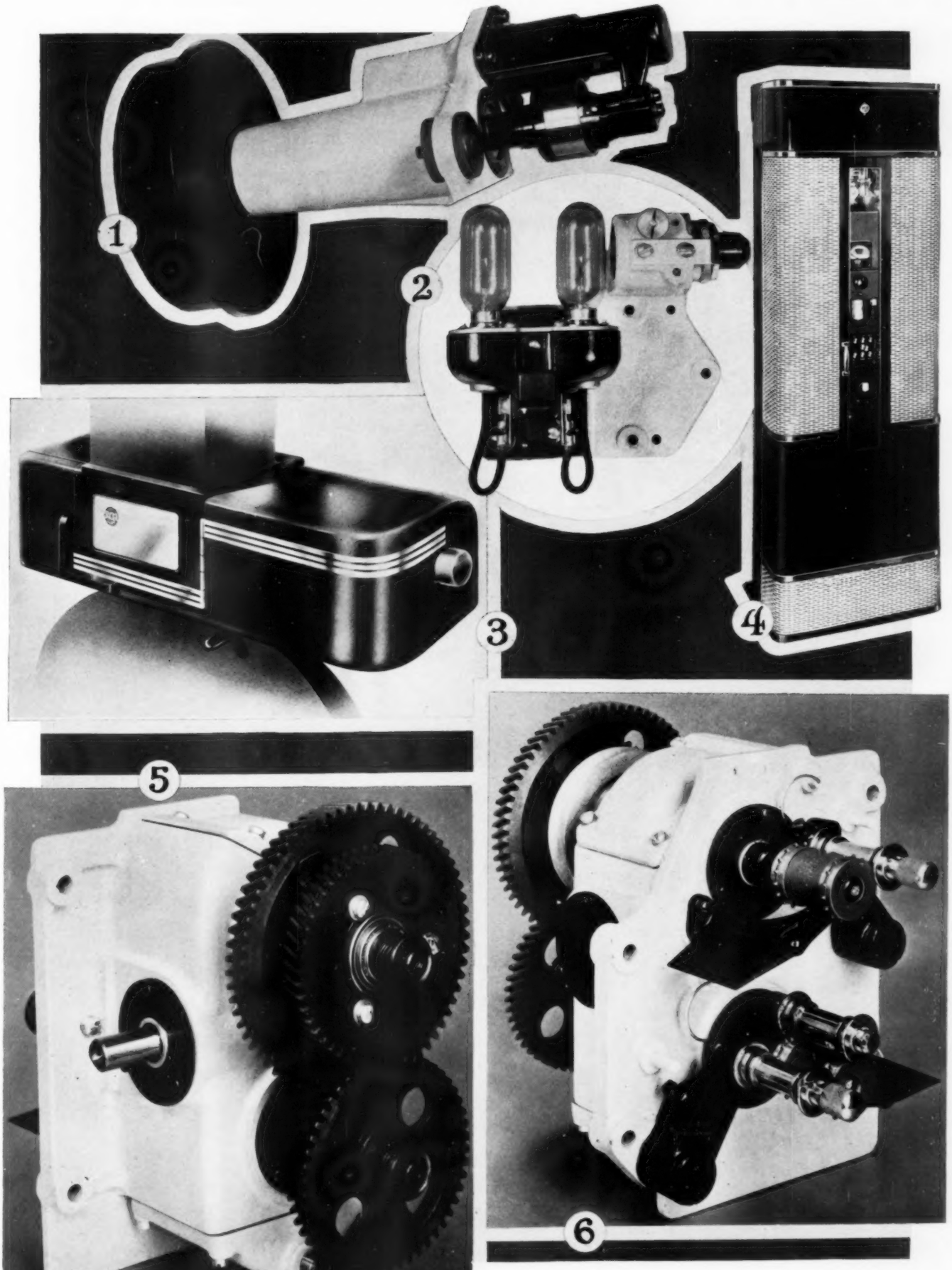
2—Two new developments in RCA Photophone's soundhead are shown here. In the front is the double exciter lamp socket, which makes a spare lamp immediately available and ready for use by simply reversing the socket. Also shown is the mechanism for focusing and locking the optical system (right). The lens can be focused quickly and accurately by the operator, and then locked securely in place.

3—The new "streamlined" RCA Photophone soundhead for motion picture projectors incorporates more than a score of new advances. It was styled by John Vassos and Lynn Brodton, eminent industrial artists. The new soundhead imparts "studio presence" to the reproduction and is more convenient to operate. A shockproof drive for the famed RCA Rotary Stabilizer and a double-switch exciter lamp device are among the improvements introduced.

4—RCA Photophone's new amplifier rack was designed by John Vassos and Lynn Brodton, famous industrial artists, for both improved appearance and convenience. The cabinet is trim and compact, and provides easy access to all parts of the amplifiers for check or repairs.

5—This is the mechanism which provides the new shock-proof drive for the RCA Rotary Stabilizer in the new Photophone soundhead. Isolation of the constant-speed sprocket shaft and drive gear from the gear train and driving apparatus prevents gear back-lash from being transmitted to the constant speed sprocket. Absolute constancy of film speed is assured.

6—The new integral gear box assembly which keeps gears in the new RCA Photophone soundhead running in an oil bath and makes gear failures virtually impossible. An oil indicator tells the operator when additional lubricant is required.

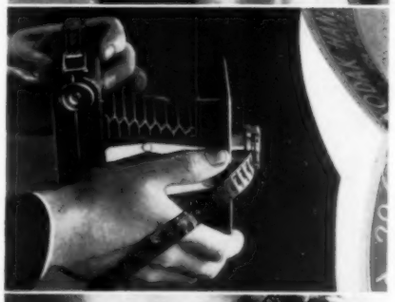


Captions on Page Opposite

A COUPLE OF "MUSTS" FOR YOUR MOVIE EQUIPMENT

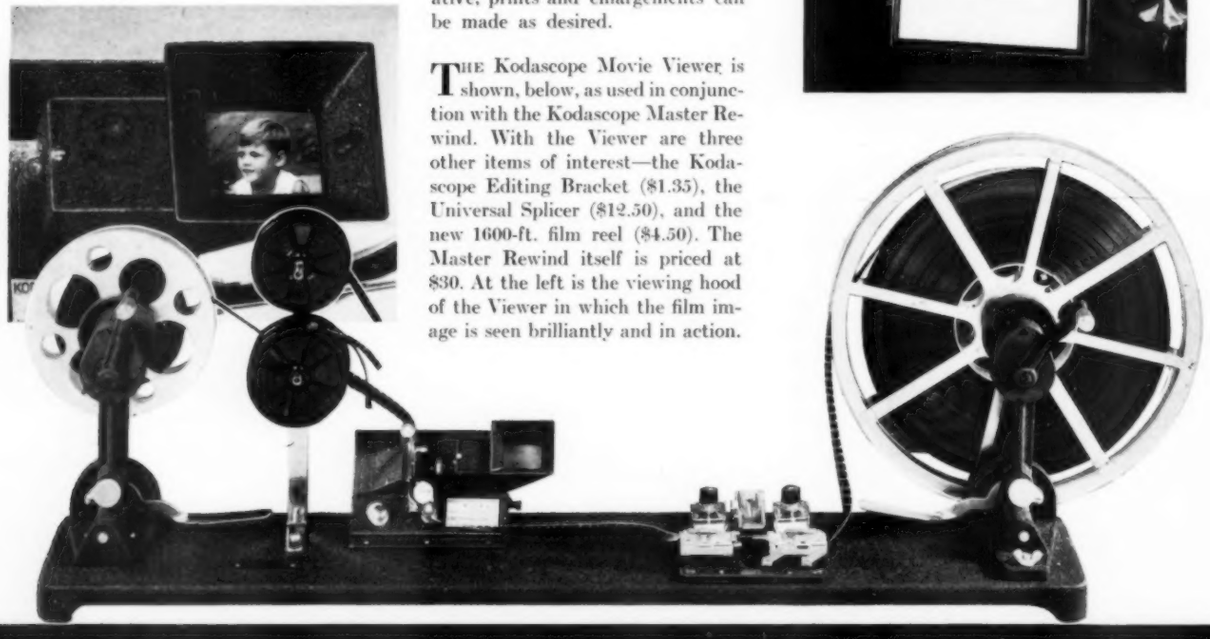
IN any roll of your movie films you'll find many a "frame" that is a good picture in itself. It may be a scenic, or it may be a close-up of some such important person as The Baby—or the baby's doting family. With the Kodak 16 mm. Enlarger it is a swift and simple matter to make an enlarged negative, about 2⅜" by 3¼", of any desired 16 mm. movie frame. Eight such enlarged negatives can be made on a single roll of 616 Kodak Film. And from those films, prints and enlargements can be had as you please. The Enlarger works, by the way, equally well for black-and-white results with either Kodachrome or regular 16 mm. film. Price, $15.

Another important Ciné-Kodak accessory is the Kodascope Movie Viewer, an ingenious little editing device that shows you your films in action. Added to your film editing equipment, it gives you instant check not only on photographic quality, but on the flow of action in your films. The enlarged film image is shown on a hooded ground glass, 1" x 1⅜" in size. Incorporated in the Movie Viewer is a spring-punch for edge-notching the film, as a means of identifying future placement of titles, etc. The price of the Kodascope Movie Viewer is $20, in either the 8 mm. or the 16 mm. model.



THE Kodak 16 mm. Enlarger in use. Right, above, the to-be-enlarged movie frame is clamped into place between a diffuser and the special 13 mm. lens in the Enlarger. Then the exposure is made, with the Enlarger held close to a No. 1 Photoflood. From the resulting negative, prints and enlargements can be made as desired.

THE Kodascope Movie Viewer is shown, below, as used in conjunction with the Kodascope Master Rewind. With the Viewer are three other items of interest—the Kodascope Editing Bracket ($1.35), the Universal Splicer ($12.50), and the new 1600-ft. film reel ($4.50). The Master Rewind itself is priced at $30. At the left is the viewing hood of the Viewer in which the film image is seen brilliantly and in action.



EASTMAN KODAK COMPANY, ROCHESTER, N. Y.

"The Girl Next Door"

By CINEMAKER

—CAST—

Tom Davis.....Aged 16 years
Mrs. Davis.....His Mother
Betty Bennett.....
A well-developed young woman, also 16
Mrs. Bailey.....
Her aunt, Davis' next-door friend
Mr. Bailey.....Her husband, well-to-do
Properties—An automobile, a lawn-rake, two market baskets, empty milk bottles, a few groceries, some school books, some baggage.

Scene 1 (Medium). Davis' living room. A large day-by-day calendar denotes it's Saturday. Tom is seated at a small writing desk, or table, struggling with his homework. Scowling, he can't seem to concentrate. He opens, leafs over a few pages, and closes, book after book. He opens his note book, starts to write in it. He pauses, reflectively, obviously upset, closes note book, and pushes all of his books away from him, disconsolately. He sits there, dejectedly, until he hears something out-of-doors. He arises and walks to the window.

Scene 2 (Medium). Tom crossing room to window and peering out.

Scene 3 (Long). Across the lawn of the house next door. An auto has driven up to the curb. From the auto alights Mr. Bailey, their next door neighbor. He assists Betty Bennett, a charming girl, out of the car and reaches in for her baggage.

Scene 4 (Close-up). Betty, in a form revealing traveling suit. She is very attractive. She fusses a bit with her hair. Mr. Bailey in background pulling out bags.

Scene 5 (Long). Across lawn next door, revealing the Bailey house front door on one side and car at curb on other. Pick up Mrs. Bailey leaving front door, clad in house dress, pan camera as she approaches her husband and niece coming up walk, her husband carrying the bags. They all meet and stop midway.

Scene 6 (Medium). Mrs. Bailey kissing first her niece, then her husband. She's extremely glad to see them both.

Scene 7 (Medium). Davis' living room. Tom standing at window, peering out.

Scene 8 (Close-up). Tom, wide-eyed with wonderment, has fallen in love at first sight with Betty.

Scene 9 (Medium). Tom, standing at window, wide-eyed, suddenly gets an idea, and breaks into action. He makes a beeline for the kitchen.

Scene 10 (Medium). Davis' kitchen. Mrs. Davis at table preparing something as Tom dashes through kitchen and out the back door without a word to his mother. Wondering what he's up to, his mother momentarily drops her work, goes to kitchen window, looks out. Her gaze follows him as he dashes around the corner of the house carrying the lawn rake. She leaves window, exits through kitchen door into living room.

Scene 11 (Medium). Davis' living room. Mrs. Davis crossing room to same window through which Tom was looking a few moments ago. She looks out window.

Scene 12 (Medium-long). Davis' front lawn. Tom is walking around the corner of the house carrying the rake. It is a deliberately slow walk compared to his mad dash to get the rake and get out in front with it.

Scene 13 (Medium). Tom, raking the front lawn and casting moonlike sidelong glances at the Baileys and Betty, who still are standing and talking on their walk midway between their car and front door.

Scene 14 (Long). Tom raking lawn. Baileys, in background, start toward their front door. None of the group has even so much as seen Tom, so busy are they with their conversations.

Scene 15 (Medium). Davis' living room. Mrs. Davis at window watching Tom making a weak pretense at raking lawn. Her wonderment turns to amazement; and the amazement, when she sees the pretty girl with the Baileys, turns to amusement. She turns, still amused, and goes back to her work in the kitchen.

Scene 16 (Medium). Tom still raking lawn, while the Baileys, in the background, exit through their front door with Betty and her baggage. None of them has even seen Tom.

Scene 17 (Close-up). Tom pouting. Abject disappointment is written on his face; he ceases his raking, and starts down the side of his house, the side away from the Bailey house.

Scene 18 (Dolly-shot). Follow Tom down the side of his house. Dejectedly, he throws the rake alongside of the house, rounds the rear corner, approaches and seats himself on the back steps. He places chin in hands, elbows on knees, forlornly.

Scene 19 (Medium). Tom sitting on back steps in above posture.

(Fade-out)

Scene 20 (Fade-in). Davis' kitchen. Mrs. Davis putting finishing touches on whatever she is preparing. She sets down her work and, going to the window, peers out.

Scene 21 (Long). Through kitchen window from inside. Tom still sitting disconsolate.

Scene 22 (Medium). Mrs. Davis looking out window. She comes away with amused smile on her face.

Scene 23 (Medium). Exterior of Bailey back door, shooting toward the Davis house, where, in background, Tom is still sitting on his own back steps, disconsolate.

Scene 24 (Medium). From Bailey back door enters Betty, carrying a market basket. She exits around the corner of her house. In background, Tom has come to life.

Scene 25 (Medium). Tom, coming to life, dashes through back door into his kitchen.

Scene 26 (Medium). Davis' kitchen. Mrs. Davis puttering about. Tom enters in a rush through the back door. As Tom rushes in, Mrs. Davis observes through the kitchen side window the new girl next door going up the walk between the houses carrying a market basket. Tom grabs up a similar market basket and places in it several empty milk bottles from under the sink. He asks his mother if there's anything that she wants from the store. Amused, she shakes her head negatively. Tom makes a beeline through the back door carrying the market basket loaded with the empty milk bottles.

Scene 27 (Long). The street on which the Davises and Baileys live. Betty is walking along the sidewalk carrying her basket. She is about 60 or 70 feet ahead of Tom, who is hurrying to overtake her.

Scene 28 (Medium). Both walking rapidly away from the camera, Tom a few feet behind Betty. He's walking a little faster than she.

Scene 29 (Medium). Tom passing Betty as she strolls along the walk.

Scene 30 (Close-up). Tom's face as he turns it toward Betty when passing her. His expression is one of eagerness combined with inquiry and breath-absorbing wonderment on his part. He speaks to her.

Scene 31 (Close-up). Betty's beautiful but calm, youthful face. She ignores his glance and words, with her nose and chin high in the air. When he speaks she elevates her nose and chin just a little higher.

Scene 32 (Medium). Back to Tom in the act of passing Betty as they walk. Tom's expression turns to one of chagrin and mortification. Plainly embarrassed, he hurries past and walks on to the store faster than ever.

Scene 33 (Close-up). Betty smiles to herself amusedly, as Tom hurries away. (Fade-out).

Scene 34 (Fade-in) (Long). Betty com-

ing back along the same sidewalk. She's been to the store. She has a few groceries in her basket. A few feet behind her Tom is strolling along. His basket is empty. He's exchanged the milk bottles for the deposit.

Scene 35 (Medium). Tom, strolling along with his empty basket. Suddenly, he braces up, lengthens and accelerates his stride, puts his teeth together and narrows his eyes in grim determination. He'll show her.

Scene 36 (Medium). Tom, overtaking and passing Betty again.

Scene 37 (Close-up, Tom and Betty). He suddenly breaks into volubility and, at the same time, gestures an offer to carry her market basket.

Scene 38 (Medium). Betty stops dead in her tracks, indignantly. Then she takes one long backward step away from Tom, glaring at him furiously. She is speechless with wrath. The very idea of him thinking that she is the pick-up type of girl. She stamps her foot with impatience, then deliberately detours away around Tom, leaving plenty of room between them, as she proceeds on her way. As she passes him, she gives him one final sniff of utter contempt.

Scene 39 (Long). Betty tripping her way daintily out of the picture away from the camera.

Scene 40 (Medium). Tom, sulking along dejectedly; his world has come to an end. (Fade-out).

Scene 41 (Fade-in) (Long). Davis and Bailey homes. On the sidewalk between the two homes Tom's mother and Betty's aunt are conversing. Betty trips gayly into the picture with her basket of groceries. Tom is sulking along several yards in the rear.

Scene 42 (Medium). Betty affectionately meeting her aunt, and being introduced to Mrs. Davis. She curtsies sweetly. Mrs. Davis calls and beckons to Tom, who is loitering and sulking out on the sidewalk.

Scene 43 (Medium). Tom enters the picture considerably abashed. He has misgivings about all women—even his own mother—at this moment. His mother cheerfully reminds him that he knows Mrs. Bailey, which he politely but reluctantly acknowledges. Then Mrs. Bailey introduces him to her niece, Betty.

Scene 44 (Close-up). Betty suddenly turns, all sweetness, beauty and light. She says that she's so pleased to meet him, and acts like she really means it.

Scene 45 (Close-up). Tom brightening up. He is reborn again. She isn't really and old snob after all. They just had to be introduced. Just a mere formality. He should have remembered the rules.

Scene 46 (Medium). Betty and Tom radiant in conversation. Tom is still a bit bashful, however. He can hardly believe his eyes and ears. He also hasn't quite got over her ferocious act of just a mere few moments ago. Their baskets are taken from them by their aunt and mother, respectively, by whom they are told to run along and amuse each other. The two youngsters stroll off still talking animatedly.

Scene 47 (Long). Tom and Betty, walking away together, now hand in hand, from the camera and into a beautiful sunset.

Scene 48 (Close-up). The two stop. Tom's right arm slides around waist of Betty. He looks at her. She turns her face to his. Her left arm slips around his waist. Both turn faces toward the sunset.

(Fade-out).

—END—

FONDA MACHINE COMPANY COMPLETES DEVELOPER

AFTER two years of planning and building, of simplifying and of ironing out of "bugs," the Fonda Machinery Company, at 8928 Santa Monica Boulevard, Hollywood, has completed work on its development machine and is ready to go. Pictures of it will be seen on the opposite page. John F. Van Leuven, sole owner of the company, made the announcement shortly after the New Year. He declared that William V. Brenbarger, associated with him in the ownership of the patents and who has done the major part of the machanical work involved in the construction of the machine, was in agreement with himself that at last their experimental work was done and that the machines could go out on the market without the necessity of machine shop maintenance.

Simplicity of construction has been one of the main objectives of the two men who have designed the Fonda. Among others have been planning and with success to eliminate as many as possible of the laboratory problems.

Film enters the machine at a constant steady speed which is maintained in an even flow throughout the developing and drying process, and is carried on 7¼-inch bakelite rollers which are all free on live shafting or tubing. The large roller diameter accomplishes the same results as expensive bearings without their initial or maintenance costs.

All sprockets and elevators have been eliminated.

Altogether these machines make for very simple, constant, safe operation and are particularly adapted to the handling of narrow film in that the soft even tension is maintained without relaxation which eliminates all turn-over tendencies so present in miniature film, especially 8 mm.

The company is giving its entire time to the manufacture of developing machinery and has the ability to supply any laboratory need for this kind of equipment.

Kodak Panatomic-X Film Available in Other Forms

Kodak Panatomic-X Film, which has become famed as a medium for miniature camera work since its introduction a few months ago, is now available in a wide range of roll film and film pack sizes, the Eastman Kodak Company announces from Rochester.

Kodak Panatomic-X has appreciably finer grain than that which won high regard for the present Kodak Panatomic Film. This improvement in grain is obtained without sacrifice in speed, as compared to Panatomic. Thus Panatomic-X roll films and packs are established as all-around, high-quality fine-grain panchromatic films of ample speed for nearly all conditions other than those requiring the extreme speed of Kodak Super-XX.

This truly fine-grain film is of special interest to owners of cameras making vest pocket or half-620 negatives, and other smaller roll film and film pack cameras producing negatives from which enlargements are desired.

Kodak Panatomic-X is recommended not only for high quality results with ordinary subjects, but also for copying photographs, halftone reproductions and documents, for technical photography, and for salon and exhibition work.

Metropolitan of St. Paul

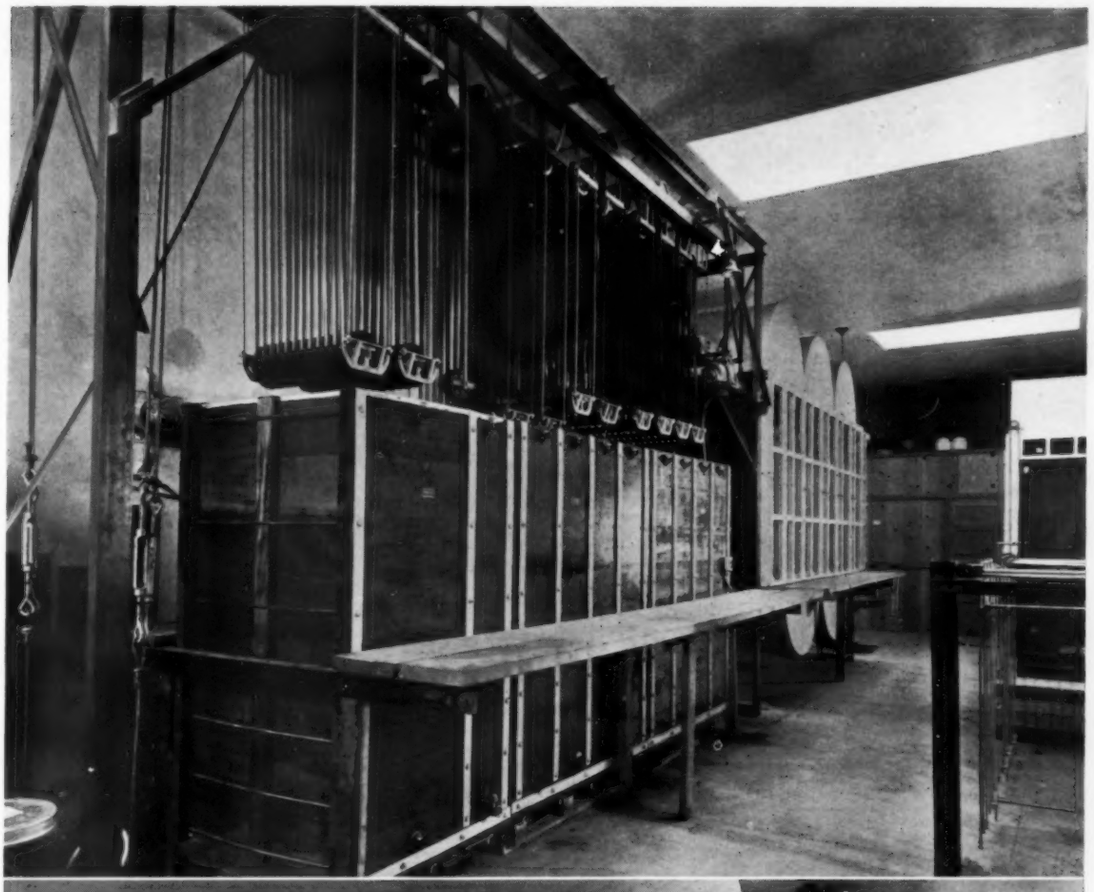
The Metropolitan Cine Club of St. Paul, Minn., held its monthly business meeting January 3 at the Angus Hotel, with increased attendance. With the St. Paul Winter Sports Carnival not far distant, starting January 28, plans were discussed and completed for filming this colorful occasion.

The opening event is the "Big Parade" made up of brilliantly colored uniformed marching units, drum corps, bands and floats, which normally takes about four hours to pass a given point. On January 17 the programme consisted of lighting studies in which a model was used in making the picture.

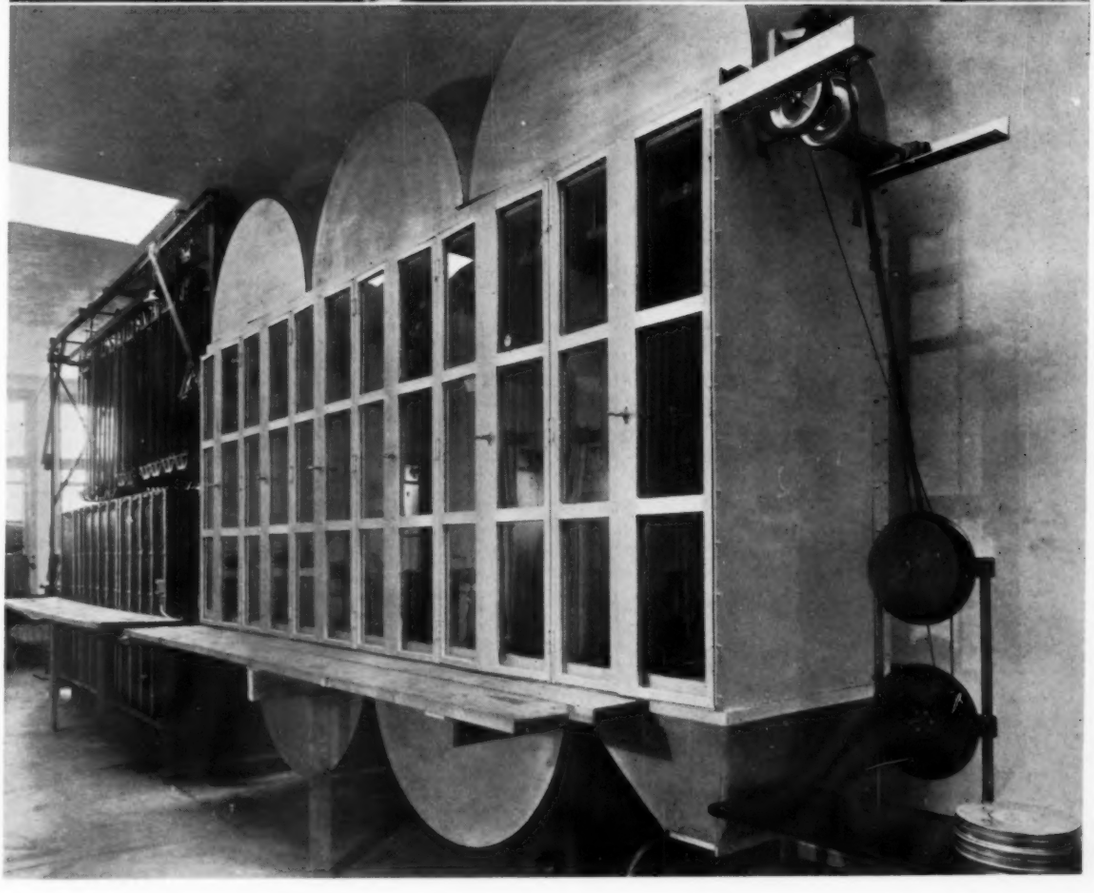
Tentative plans for a full and interesting season of motion picture study have been completed.

HAROLD E. PIGGOTT, Secretary.

Picture of Fonda Developing Machine photographed from the wet end. Running board indicates floor level.



Fonda Developing Machine photographed from the dry end.



BERT GLENNON INTRODUCING NEW METHOD OF INTERIOR PHOTOGRAPHY

By JOHN CASTLE

WHILE sort of "covering Hollywood" for a national publication the idea of getting the point of view of The Man Behind the Camera appealed to me as a method of obtaining facts without the usual glamour and elevated adjectives of your very efficient publicity departments.

Bert Glennon was highly recommended to me as a man whose progressiveness and sincerity has kept photographic competition moving, so over to United Artists Studios and particularly Walter Wanger's production which Glennon was photographing to take a look at this individual.

Upon introduction Glennon suggested that observation was an important asset to a writer, so I enjoyed watching John Ford, the director of "Stagecoach," move his people around in smooth delineation of the characters they were portraying.

There was that amiable goof, Andy Devine, as the stagecoach driver; serious George Bancroft as the marshal; the delapidated Thomas Mitchel as the drunken doctor, and convincing Claire Trevor as the—well, the "lady," if you know what I mean.

This group is only a part of the cast and were the only characters working during my observation.

Time Most Expensive

Really, present day motion picture production is amazing—that is, the effective effort used in accomplishment of scene photography is amazing, if all directors work like Ford and Glennon. The smoothness of handling people and the precision of mechanical methods is a demonstration of time-saving procedure.

Time, as I understand it, is the most expensive item concerned in the production of a motion picture. In some cases I am told it will run about $150 a minute during the working day.

Please let me describe the modus operandi of one complete scene. At the close of a scene the stillness was broken by the buzzing of voices, each person concerned attending to his particular responsibility.

The lights and cameras were moved to the edge of the set and everything became quiet again—moderately so. Ford and Glennon stood in the center of the set, which was a low ceilinged adobe room that I suppose was a part of a desert overnight stop for the stagecoach.

I could not hear their conversation, but both were gesticulating. (I noticed nearly all persons around a motion picture set do a lot of talking with their hands.)

Mr. Ford then walked off the set with an "Okeh" and Glennon remained there for a few seconds. He appeared to be planning. He looked at the ceiling, then started to back away as if measuring. He called for a "Finder, please, 25 millimeter."

X Marks Spot

One of the men at the camera quickly obeyed. "Right here," said Glennon, and a grip, as they call the man who handles immediate construction and moves heavy equipment, marked the position of Glennon's feet with a chalk mark X.

The crew around the camera moved it to that exact spot and leveled it accurately. Glennon then went into a discussion with his chief electrician, who proceeded to follow his instructions. Lights started to move into position. I heard Glennon ask for a redress of the angle of the property department and call for the actors' stand-ins.

The sound crew started to move into their position and I noticed Glennon and the man in charge of sound discussing the scene. Everything seemed to move swiftly, and at no time was I conscious of any confusion. If anyone wished to know something about the scene they asked Glennon. He seemed to be the source of information, and I wondered about such a procedure and decided to get his answer on that ques-

Cinematographer Bert Glennon, at left, and Director John Ford study lighting and set before making a scene for Walter Wanger's "Stagecoach." Ford, renowned for his ability to build romance into two fisted characters, was thoroughly pleased with his "Stagecoach" assignment. Apparently Glennon is of the same mind.

tion as soon as I could have a moment with him.

After a very short time Glennon called the assistant director and told him that the set was ready. Mr. Ford then checked the "set-up," people's position and general camera movement. He then ran a mechanical rehearsal with the cast concerned to disclose any difficulty that might develop out of the scene's mechanics, after which he "got down to brass tacks" with his people.

Scene Was History

When satisfied he called for "Cameras!" and the scene was history. (As Glennon told me afterward: "Ford knows what he wants and when he has it, so I had better be right the first time because he will not take a scene more than once if he gets it the first time.")

A yell from Ford that the scene was Okeh started the same buzzing and bustling as the crew began clearing the set for the next set-up.

This same procedure was adhered to until the company "broke" for lunch. My mind was filled with questions, and Glennon, I hoped, would supply the answers.

On our way to lunch I started with: "Now, you told me what observation meant to a writer. Well, here are a few of my observations: That you not only photograph the picture, but you are a stage manager as well. Is that common with all production units?"

A.—I don't think it is an accepted practice, but in Mr. Ford's case he desires to explain and discuss the mechanics of his requirements to one man and relies upon that man to follow through.

He has a crew of experts in their line and their cooperation is 100 percent. The present arrangement seems to work out for Mr. Ford and saves valuable minutes of time. After all, the camera is putting the result upon the screen. So I guess the added responsibility doesn't hurt.

Who Most Important

Q.—In your crew whom do you consider the most important?

A.—All concerned are important, but I suppose the assistant cameraman is the most vitally important. To explain, our lenses have a very narrow plane of critical focus which must be held on the chief point of interest throughout the scene. In this particular picture where most of the scenes are taken once that gentleman must be on his toes and not miss, and this one doesn't.

Q.—Other sets I have visited have many lights placed all around the top. I notice no parallel construction for lights on any of your sets and all of them have ceilings. Is that something new?

A.—Yes, it is a decided break from the conventional method of lighting sets and people. The ceilings were necessary because the sets were low, and as a certain reality of perspective is obtained by the use of the 25mm. lens, which included ceiling in nearly every shot, the elimination of the conventional backlight or "Hollywood halo" was forced.

Believe me, it is quite difficult to obtain "roundness" of image without the use of backlight, but in order to follow out the photographic idea, which was "reproduce the method of lighting as used in the Sargent paintings of the early West," it was necessary to use backlight only when it was the source of the light.

Q.—Do you always have a photographic idea to follow when lighting a motion picture story?

The Photographic Idea

A.—That depends. If the production warrants, a photographic idea is adhered to religiously. On the other hand, if the producer is forced to hold the production to a tight schedule, the only way one can make time is what I call a formula in lighting which lends itself to tremendous speed. Fortunately, I have been assigned to important pictures in the last three years.

Q.—What was your last picture and what was the photographic idea?

A.—John Ford's "Hurricane" for Sam Goldwyn. "Hurricane" was a deliberate attempt to feature Sound, Music and Photography—a cooperative determination to co-ordinate these three elements to produce a definite emotional effect upon the audience. It was a success. The sound won the Academy award and the picture is rated one of the ten best this year by the national press.

Q.—And the picture before that?

A.—Lloyds of London for Twentieth Century-Fox. This period picture with its costumes and old painting settings was photographed to create the idea of mellowness and texture throughout the production. It won for me an associateship in the Royal Photographic Society of Great Britain.

Q.—Let's take one more.

A.—"The Prisoner of Shark Island," for Twentieth Century-Fox, in which the effect of "steel etching" quality was strived for in all scenes, especially the close-up work. This effect was obtained by the use of blue light.

Making Strides

Q.—What is the future for motion picture photography as a whole?

A.—The technical side is making tremendous strides in all branches. Continual application is necessary to keep abreast of that progress.

Q.—And the artistic side?

A.—Photographic achievement rests entirely with the courageous creative ability of our camera personnel.

On our way back from a sandwich we passed through a very large sound stage wherein a western street was constructed. There must have been about twelve buildings and spread out over the entire stage from wall to wall.

An art director approached and something was said about wetting the street down and there was a brief discussion about one of the backings at the end of the street. We resumed our interrogation.

Q.—When do you come into this set?

A.—Late this afternoon.

Q.—But I don't see any lights up high. In fact, I don't see any at all. What does that mean?

A. (smiling)—You are observing, aren't you? Well, all of the scenes are at night, so we decided to have our action lighted from the true source: light coming from doors and windows and occasionally a street lamp.

Q.—I imagine production expense has been lowered by your method of lighting?

Foot-Candle Meter

A.—On this picture it has. Whether or not this type of lighting will lead to a progressive step remains to be seen.

Q.—What is that instrument you hold before the lights while preparing or lighting a scene?

A.—Oh, that? Why, it's a foot-candle meter which measures the intensity of the light falling upon an object. By adjusting the light to a predetermined reading on the meter the lighting is kept rigidly constant throughout the picture.

The advantage principally concerns the consistent developing and printing range of the negative. So far the negative of this production has developed between 10.5 and 11.5 minutes and the range of printing is within three lights on the print scale.

Q.—How long have you been using this method of procedure?

A.—For the past two years. The Technicolor Corporation designed and calibrated the meter for me, and it is now my constant companion.

Q.—Do you think other studios will adopt this procedure?

A.—Yes, I think so. I recently read an article where Twentieth Century-Fox has made a meter of similar design a part of each cameraman's equipment.

Q.—How long have you been studying light and its reaction to photography?

A.—All my life.

Q.—And what do you know about it?

A.—Nothing.

Q.—But you do know how to use it?

A.—Yes.

So back to the set to clean up a few more set-ups before moving over to the big set. My time was up, and as I walked out of this studio I fully realized the amount of intelligent effort and thought that is expended to give us the entertainment we see on the screen. I salute The Man Behind the Camera.

CANDIDATES NAMED FOR ACADEMY CAMERA HONOR

THE productions nominated for the Academy photographic award vere announced just prior to the closing of the Cinematographer's forms. Under the rules the photographic staff of each studio named one production from that organization for the consideration of the group qualified to make the selection. The pictures and the unofficial credits attached to each are as follows:

Algiers, James Wong Howe, Wagner's.

Army Girl, Harry Wild and Ernest Miller, Republic.

The Buccaneer, Victor Milner, Paramount.

The Great Waltz, Joe Ruttenberg, M-G-M.

Jezebel, Ernie Haller, Warner Brothers.

Mad About Music, Joseph Valentine, Universal.

Merrily We Live, Norbert Brodine, Hal Roach.

Suez, Peverell Marley, Twentieth Century-Fox.

Vivacious Lady, Robert De Grasse, RKO-Radio.

You Can't Take It with You, Joseph Walker, Columbia.

Young in Heart, Leon Shamroy, Selznick-International.

The special rules for the Cinematographic award of the eleventh annual Academy awards of merit are as follows:

Cinematography: For the best achievement in cinematography of a black and white picture, 80 percent of the release footage of which must have been photographed in America under normal production conditions.

(1) One picture from each studio shall be nominated for this award. Each studio's nomination shall be chosen by that studio's photographic staff under the direction of the head of the camera department.

(2) The one production to receive the cinematographic award shall be chosen from those productions nominated in accordance with paragraph (1) above, by a committee to be known as the Cinematographic Award Committee, which shall consist of one representative of the photographic staff of each studio nominating a production for consideration for the award.

(3) Each studio's representative on the Cinematographic Award Committee shall be selected by the photographic staff of that studio, except that any member of the photographic staff of any nominated production is ineligible to serve on this committee.

(4) In order that each member of the Cinematographic Award Committee may judge the photography of all nominated productions upon the same basis, it is specified that the committee shall view all of the nominated productions at a series of special showings to be arranged during the Awards period.

In order to participate in the vote to select the one picture to receive this award each member of the Committee must view all of the nominated productions under the same viewing conditions in the same viewing room. It is further specified that all voting by the Cinematographic Award Committee shall be by the "preferential" system of voting and shall be governed by the regular rules set up for this system of voting.

For Art Direction

The following productions have been nominated for the Academy award for achievement in art direction:

Adventures of Robin Hood, Adventures of Tom Sawyer, Alexander's Ragtime Band, Algiers, Carefree, Goldwyn Follies, Holiday, If I Were King, Mad About Music, Marie Antoinette and Merrily We Live.

Academy Names Committees to Revise Technical Rules

Nathan Levinson, Chairman of the Technicians Branch of the Academy, has named these committees to consider the rules used to govern the various technical awards last year, for the purpose of determining whether or not changes should be made for use this year.

Cinematographic Award, Joseph Valentine, chairman; John Arnold, Joseph August, Norbert Brodine, Edward Cronjager, Robert DeGrasse, Arthur Edeson, William Eglinton, George Folsey, Jr., Fred Gage, Merritt B. Gerstad, C. Roy Hunter, Thomas Ingman, Ray June, Sidney Lund, E. B. McGreal, George B. Meehan, Jr., Virgil Miller, Victor Milner, Ira Morgan, L. William O'Connell, Emil Oster, George Robinson, Roy Seawright, George Seid, Karl Struss, Allen Thompson, Joseph Walker, Vernon Walker, Lester White, and Ray Wilkinson.

Sound Recording Award, John Aalberg, Bernard Brown, E. H. Hansen, Nathan Levinson, John Livadary, C. L. Lootens, Thomas Moulton, Elmer Raguse, Loren Ryder, and Douglas Shearer.

Technical Award, Executive Committee of the Academy Technicians Branch, the membership of which consists of Nathan Levinson, Chairman; John Arnold, Farciot Edouart, Fred Gage, Wesley C. Miller, Van Nest Polglase, Ray Wilkinson, and Bernard Herzbrun, chairman of the art directors' section; Peter Mole, chairman of the equipment section; Harold J. McCord, film editors section; Ray June, photographic section, and William Muelter, sound section, and Gordon S. Mitchell, manager of the Academy Technical Bureau.

APRIL 14 DATE SET FOR LITTLES' TENTH PARTY

IN the last week of January Duncan MacD. Little has mailed word to his many movie making friends the world about asking them to contribute films for consideration by the jury which will select the program for his Tenth Annual Movie Party.

Mr. Little has requested that films arrive in New York not later than March 10 so that there may be ample time for the jury to select the films to be screened, and then, with the selections made, to arrange appropriate musical accompaniments for all films.

The party will be held on Friday evening, April 14, at the Barbizon Plaza Theatre, for, as our readers know, these affairs had grown to such size by 1937 that it was necessary to "hire a hall" so great was the demand for tickets among the friends of Mr. and Mrs. Little.

The Salle des Artistes in New York City was packed in 1937 and 1938, the audiences numbering in excess of 300 in both years. And yet the demand was greater than could be accommodated.

This year for the Tenth Party a still larger auditorium has been selected, and, on account of the increasing expenses of this extraordinary institution of amateur movies, Mr. and Mrs. Little have decided to place their tickets upon a subscription basis, hoping the interest of their friends and the movie-minded public in general will be sufficient that their expenses will be equaled, and possibly exceeded.

Surplus to Charity

Having no wish to profit in any way other than to meet expenses, Mr. and Mrs. Little announce that any surplus of receipts above actual expenses will be given in full to the Peabody Home for Aged Women, the only free and non-sectarian institution of the sort in New York City, and in which charity Mrs. Little is much interested, being a member of the Woman's Auxiliary.

The organization and plan of the party is to be similar to that which has been the custom for the past several years.

The list of "invitations to contribute"

numbers in excess of two hundred, and these are addressed to amateurs in twenty States of the Union, in four Canadian Provinces and twelve foreign countries. Truly the Littles' Movie Party has become international.

These affairs have grown by leaps and bounds, from a modest beginning in 1929 when there were but twelve guests and no contributors, only films of Mr. Little's production having been screened at that event.

This year, because of the innovation of the subscription idea, Mr. Little will place no film of his own before the jury, his great interest and desire being simply to learn whether or not such a program as has been screened during the recent years can justify the great amount of work and the close attention to a vast number of details that such a party involves.

Guide for Future

The Littles have enjoyed placing these programs before their friends and they have enjoyed, too, the making of new friends at home and abroad that has resulted. They believe their plans for the Tenth Party will produce concrete evidence of what should be done in the future.

If these events are to continue, now is an excellent time for others interested, either as amateur film producers or as audience, to band together behind Mr. Little, and form an organization to assist in the work and to relieve one willing person of the burden and the financial strain of carrying-on alone.

Mr. and Mrs. Little have told this magazine of their hope that such an organization might be formed—an organization not to take the place of any of the present worthy groups that are doing so much to advance the amateur film but rather an organization that can assemble from these many groups and the countless legions of lone workers the creditable films that they produce and make them available for screening before the many, be they non-moviemakers or experts, who nevertheless are interested.

MAKE-UP AND SET PAINTING AID NEW FILM

(Continued from Page 56)

colors which gave one impression visually and another actinically.

It is not unlikely that much of today's vogue for white and gray sets could be traced to an effort—subconscious, perhaps—to eliminate such misunderstandings.

Painting Suggests Depth

Personally, I can think of no other valid excuse for some of the white sets I have seen lately! These troubles, we have already proved, are eliminated with the use of these standardized pastel set colorings.

But there is a further practical advantage to the set-painting system we have developed. Granting of course proper cooperation between the set-designer and the cinematographer, the use of these colorings can do a great deal to simplify the cameraman's task of suggesting in a two-dimensional picture the third dimension of depth.

One of the principal sets for "Three Smart Girls Grow Up," for instance—the living room of a wealthy family—was painted entirely in shades of pink and tan. Columns, corona, arches, baseboards and other features one would naturally expect to have stand out well from the walls were painted in a light shade of tan.

The walls themselves were in an intermediate shade of pink, while the friezes above the columns, and some of the decorative panels on the walls were in a darker shade of the same color. The panels were outlined in a yet darker shade.

The result was a set which not only photographed pleasingly but which was easier to light. The columns, for instance, stood out naturally against their darker background, while at the same time their light tan coloring did not give the glaring effect they would have if they had been painted white or even an equally light gray.

The dark pink friezes, set off by the tan cornices and architraves above and below, also stood out in natural relief with far less modeling lighting than would otherwise have been necessary.

Can Predetermine Value

The same ideas were carried out on the other sets, with varying color schemes. Some sets were entirely in the blue-green, in blue-green and tan, and others which would ordinarily have been white or very light gray in the lighter shades of the blue-gray.

In every case both Otterson and I knew before a bit of paint had been applied to the set exactly what would be the photographic value of any given area. From this we could easily determine whether its shade was correct to match my plan of lighting, and to give visual relief to the picture.

Another important if less obvious aspect of this system is the psychological effect upon the actors, and in fact upon the whole company. Some colors—which may perhaps photograph excellently—are known to have a disturbing influence on people.

Color stylists have told me, for instance, that they avoid certain shades of green in decorating airplane cabins because of their proved tendency to induce airsickness and nausea. All of us have seen rooms whose coloring seemed imperceptibly to set our nerves on edge. The shades we have chosen have been selected because they are psychologically soothing shades.

I've noticed myself that everyone in our troupe, whether they were acting in the sets or doing technical work on them, seemed mentally at ease. This may seem a small point, but mental attitudes can do a lot to make a picture good or bad.

Day-or-Night Backings

Yet another innovation we have tried, and found successful, is in backings. During the last year we have experimented considerably with large backings, painted in natural colors, rather than in the usual black-and-white. Especially in this latest production, we have found them definitely better.

Using natural colors, they appear more convincing, not only to those of us working on the set, but on the screen as well. The actual foreground and the painted backing seem to blend better with each other.

Lighting such backings is easier. Being in natural colors, they seem to have a higher reflective value—to require less light than conventional monochrome backings, photographic or painted. This is especially true with the new films, the increased color sensitivity of which enhances the value of natural colored backings.

Several of the sequences for which these backings are used required both day and night effects. Ordinarily, where night effects are called for in scenes using backings showing city buildings, a separate backing, with "illuminated" windows painted in, would be used.

Take Advantage of Speed

But since we were using the new Plus-X, why could we not, I wondered, take advantage of its speed to illuminate those windows with light instead of paint?

We tried it—and it worked. All that was necessary was to block out the back of the backing in the areas we wanted dark, and leave clear the spots we wanted "illuminated." At first we used heavy kraft paper, carefully cut out around windows and the like. More recently we discovered that opaque black paint, applied to the rear of the backing as desired, does quite as well and is quicker and easier to apply.

The windows are lighted up very easily by the simple expedient of placing a "broad" or two behind the backing, where its light will shine through the "window."

The front lighting is done in a lower key, to suggest night exactly as though we were making a night effect on a normal set. It is really surprising how successful this simple trick has been, even when, as happened several times, our players have had to work quite close to the backing.

B & H Continuous Attachment Provided for 800 Foot Film

Photo by Bert Glennon

The new 800-foot continuous attachment of unique design announced by Bell & Howell for use with Filmo and Filmosound Projectors has been developed not only to provide greater "show" capacity than has been previously available in such a mechanism but to incorporate features which add very appreciably to the life of the film used.

To eliminate friction between the film layers, the attachment is mounted in a horizontal position. The edge of the film thus bears the film weight. The design is such that the convolutions of film are caused to spread apart from one another, making the film run loosely in the attachment.

The new 800-foot continuous attachment is for use with 16mm. films, either sound or silent. Eight hundred feet of sound film, at 24 frames a second, provides a 22-minute showing; silent film at 16 frames a second provides a 33-minute showing, before repeating. Showings of these extra lengths are very much desired by those exhibiting at fairs, conventions, etc.

Traveling Photo Show

A traveling show of 75 outstanding photographs from the files of the Works Progress Administration has been compiled and is available without rental fee for exhibition by photographic societies and art museums throughout the United States.

The collection includes varied applications of the documentary technique in photography as well as illustrative photographs, dramatic angle shots of industrial and construction subjects, architectural photographs and genre and human interest pictures. There are many excellent modern examples of pure design, pattern and texture.

All photographs in the show were selected from the regular working files of negatives made as a photographic record of the Federal Works Program.

The exhibition may be obtained by paying only transportation charges. For information and dates write to William C. Pryor, chief Photographic Section, Works Progress Administration, Washington, D. C.

Only eight motion picture films were produced in Australia during 1938, the chief competition encountered by American films in that country coming from the product of British industry, according to a report to the Department of Commerce.

Six New Photophone Soundheads

(Continued from Page 76)

at the edges, eliminating glare and permitting a clearer view of the interior.

The photoelectric cell transformer has been entirely shielded in a cast iron chamber in the soundhead, insuring virtual absence of noise from static in the soundhead, another improvement new to this equipment.

A completely new system of mounting the picturehead in the soundhead has also been devised. A separate, removable plate is provided atop the soundhead to which the picture head is fastened. It is then only necessary to remount the removable plate on the soundhead, securing it with four screws on the outside.

This contrasts with the older method of running long unhandy bolts from the picture head into the soundhead. The removable plate also serves as an oil collection plate, gathering oil drips from the picture head and feeding them into a tube which empties into a removable container.

The mounting plate is also designed to provide easy adjustment of the picture head in relation to the soundhead for the proper meshing of the picture head drive gears.

LIGHTING NEWS *Extra*

ON THE SET — EVERY DAY

SUPER-SPEED ROMANCE

INSIDE FACTS ABOUT NEW HOLLYWOOD TWOSOME

By Cholly Catwalker

In the short time he has been getting around in Hollywood, young Fast Film has become known as a choosy boy. He doesn't go for the bright lights as did some of his respected ancestors. Oh, dear no! What illumination he has must be smooth and discreet, without a trace of shadows or "hot spots."

That is where young "Baby" Junior of the Solarspots made a big hit with the newcomer. "Baby" Junior isn't very big, and never has been a bright-light type herself, but true to Solarspot family tradition, she's always beaming, with never a shadow or the faintest suggestion of a "hot spot." No wonder everyone says, "They seem made for each other!"

Principal In Latest Hollywood Romance

Latest portrait of "Baby Junior" Solarspot, reported by Hollywood columnists as seen everywhere with the sensational newcomer, Fast Film. Baby Junior comes from one of the most distinguished families in Hollywood. Direct descendant of the Solarspots, Senior and Junior, originators of smooth, shadowless spotlight-beams, Baby Junior traces her ancestry in an unbroken line to the first "Inkies" to greet Panchromatic Film, direct ancestor of Fast Film, on arrival in Hollywood over a decade ago. This new linking of the 1939 generation of two famous families is singularly appropriate.

FAST FILM, SOLARSPOT "THAT WAY"

By Walter Windshield

The latest in Hollywood romances is that Fast Film and the Mole-Richardson youngster, "Baby" Solarspot, are twoing. Following early encounters with the older, heavyweight members of the lighting family, reported to have left the celluloid newcomer thoroughly "burned up," F. F. and Baby Jr. have been going together with that old "you were made for me" glint in their eyes.

The traditional baby of the Solarspot family is taking it big. As who wouldn't? For years relegated like a baby sister to obscure "fill-in" tasks, suddenly promoted to key lighting posts illuminating glamorous stars, and paired romantically with the sensation of the day, Kid Fast Film himself?

According to the grapevine and my girl Thursday, Baby Junior and Fast Film have been seen holding hands by practically all of the Supreme and Plus-X sets. From where I sit it looks like a steady combination, with the older members of the Solarspot family, Junior and Senior, chaperoning happily from the catwalk behind goboes and dim bulbs.

Perhaps Some Day—
You'll Light Sets With Matches:
Until Then

SOLARSPOTS ARE BEST FOR ALL FILMS

MOLE-RICHARDSON CO.
941 North Sycamore Ave. Hollywood, Calif.

Gadgets for the Moviemaker

(Continued from Page 58)

an inch in length. Grasping this between thumb and finger made focussing a pleasure (Fig. 6).

As to Rewinding

It appears that many projectionists delay the show by rewinding each reel as it is shown and possibly that is occasioned by the difficulty in identifying the subject matter if several reels of film are shown and all rewound upon conclusion of the program.

I solved this easily by splicing a short length of film leader on the end of each film and printing the title of the picture on this strip in India ink.

By running all your reels before rewinding, your show is speeded up and your friends will appreciate that fact whether they are aware of it or not.

For a novel addition to an evening of movies try the projection of some still frames. If your projector is of a type permitting the easy removal of the condenser lens you can vary the show with the least of effort.

Save your film clippings and splice about three frames of each together and wind on a small reel. Thread your projector as usual.

Disconnect the motor belt from the claw driving mechanism, raise or open the heat screen, and when you have removed the aforementioned lens switch on the cooling motor and lamp and by hand-turning the knob actuating the claw you can quickly turn each frame into position and project large clear stills for any length of time without danger of burning.

With my projector I found I could project a single frame for several minutes with no apparent harm to the film other than a slight drying, but as cuttings will be used for the purpose there is nothing to worry you in the connection.

Movie Club Notes

New York 8mm. Club

The New York 8mm. Club held its December meeting at the Hotel Pennsylvania with nineteen members and four guests present. The business meeting covered the club party, to be held in January. The question of a film library for the club was taken up.

Two well known films from the library of the American Cinematographer, "New Horizons" and "Tender Friendships," were shown and discussed. The exchange film, "The Beach Comber," by Anchor Jensen of the Seattle 8mm. Club, was followed by a film submitted by a proposed member, Mr. Carruth, entitled "Around Europe"; an interesting underwater picture taken in Florida by Albert Shafenberg (without using a polaroid filter). The newest and a really unique film was brought by a guest, Larry Silverman, who is an animator with Terry Toon pictures. His film, "Making 'Em Move," in color, was most interesting and inspired many questions. Our titling expert, Mr. Bravdegie, next showed a collection of New York 8mm. leaders with excellent and varied titles. The last film was an "Old Timer," valuable chiefly as contrast and as a record of happenings 25 years ago.

Cinema Club of San Francisco

At the regular meeting of the Cinema Club of San Francisco, held Tuesday evening, January 17, K. G. Stephens, fellow Club member, exhibited both Kodachrome movies and colored slides of New Orleans and the surrounding territory taken on a recent trip to this fascinating and colorful city.

E. K. Hill, Sun Valley representative

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Tonight
in Movies, Vividly Shown on a

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Your picture record of never to be forgotten days will be more brilliant, more realistic and more thrilling when you show it on a Da-Lite Glass-Beaded Screen. Details are sharper. Colors are true to life and retain all of the gradations of tone your camera has captured. Da-Lite Glass-Beaded Screens are available in many styles—box type table models, hanging screens and the Challenger with tripod attached (shown above) which can be set up anywhere in 15 seconds. Prices range from $2.50 up. Write for literature and name of nearest dealer.

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Manufacturers of Theatrical and Non-Professional Screens With All Types of Surfaces and Mountings.

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of the Union Pacific Railroad, presented 1600 feet of Kodachrome, accompanied by sound, of winter sports at Sun Valley, Idaho. The scenic effects in this picture are unusual, and it had the added interest of being one of the first Kodachrome duplicates produced by the Eastman Kodak Company.

DENIS DONOHOE, President.

Los Angeles 8mm. Club

With a gathering of 300 members and guests the "Cinematographer Night" meeting of the Los Angeles 8mm. Club was held at the Vine Street School Auditorium, 955 North Vine Street, on January 10.

President Leitch announced the following committee appointments:

Social, John K. Northrop, James B. Ridge, Henry Huddleston.

Technical, Robert W. Teorey, Milton R. Armstrong, Randolph B. Clardy, G. Loren Foote.

Contest, C. M. Drury, George T. Hewitt, E. L. Emenegger.

Shut-In, Claude W. A. Cadarette, C. William Wade, Jr., Leon C. Sprague.

Thru the Filter, Robert W. Teorey, editor; Ladies' Activities, Doris Lee; club artist, Randolph B. Clardy; still photographer, James B. Ridge; club projectionist, Dick Moore.

G. Loren Foote was then presented with the Horton Vacation Trophy his "High Sierras" film won for him in the annual Club contest.

As a part of his platform of "a fifty-foot reel from each member," President Leitch presented an honor roll prepared by Club Artist Clardy. Members exhibiting film at meetings will have their names placed on the roll, and it will be hung in a conspicuous place at each meeting. Another feature of the year is to be a box where members can deposit unsigned suggestions or criticisms regarding club activities.

The meeting was then turned over to George Blaisdell, editor of The American Cinematographer, he in turn introducing William Stull, who presented the winning pictures of that magazine's 1938 International Contest. The pictures all had been set to music by Mr. Stull, who as in former years supervised the recording.

V. P. BURDICK, Secretary.

Philadelphia Cinema Club

It was a pleasure to hear from G. C. Crebbin of the Bausch & Lomb Optical Company and to see the motion picture "Eyes of Science," developed by that company, in connection with the manufacture of motion picture lenses. Both the picture and Mr. Crebbin were present at the January meeting of the Philadelphia Cinema Club. Both were thoroughly enjoyed.

At our December meeting "Herb" McKay demonstrated the proper way to light for indoor Kodachrome. To back up his demonstration he took a film, which was shown at the January meeting, indicating that he was correct in his explanation for light values.

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ern division of the Bell Telephone Company the membership was privileged to see the company's 800 foot black and white film, entitled "Safety First and Last." George Pittman, head of the technical committee of the club, was the photographer who shot the film for Bell Telephone.

A 400 foot film depicting the glories of the Wissahickon was shown by S. Trennor, and a 800 foot Kodachrome by Carl Finger carried us from Philadelphia through Central Pennsylvania to the Grand Canyon of Pennsylvania, up to Niagara Falls, and back again on one rare tour of autumn color.

Members of the club were invited to a private showing of film at Station KYW January 23, and also were to be the guests of the Philadelphia Photographic Society in its studios on January 31. B. N. LEVENE.

Linderman Visits Hollywood

Robert Linderman, managing director of Mole-Richardson (England), Ltd., of London, is currently visiting Hollywood. The head of Mole-Richardson's thriving British affiliate made the trip to survey the latest Hollywood technical advances and to keep in touch with the progress of design and manufacturing methods at the M-R parent plant.

Cine Club of Dallas

At present the Cine Club of Dallas is in the process of expanding its membership and now has about fifty members. These amateurs meet the first and third Tuesdays of each month at the Jefferson Hotel. We have completed several club pictures; the latest, a topical picture of the City of Dallas, was presented to the Dallas Chamber of Commerce.

The pictures mentioned do not include any made by individuals in the club, and they have been very active. We would like to exchange pictures with any club desiring to exchange with us.

I am inclosing a clipping from the Dallas News about our recent contest and a program of the Open House, where we entertained approximately 350 guests.

Our last meeting was a gadget meeting, at which all members brought equipment made by themselves. This is a real idea for other clubs to follow if their members like to make their own. It was really surprising to see the fine equipment that had been made by these amateurs.

Contest judges were R. K. Johnston of Interstate, James Lovell of the Dallas Times-Herald and Fairfax Nesbit of The Dallas News.

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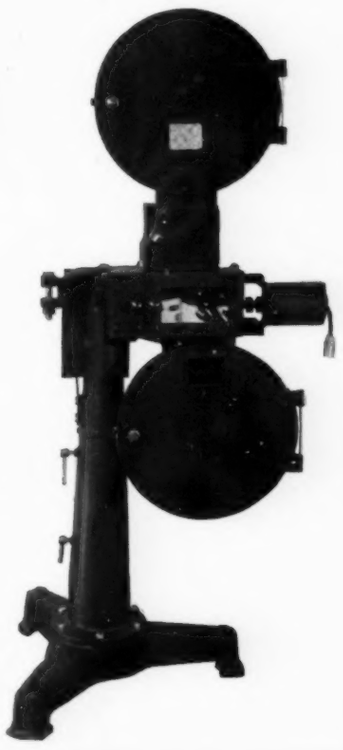

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Photo by Bert Glennon

The 'Eighth Art' Describes Romance of Color on Film

The Eighth Art. Victor Keppler. William Morrow and Company, Inc., New York. DeLux Edition. $12.50.

WILLIAM MORROW and Company display excellent taste in its presentation of "The Eighth Art," by Victor Keppler. The efforts of each and every individual and firm concerned deserves praise and congratulations for their accomplishment. It is a beautifully mounted book and makes an effective plea for a place in the library of the most discriminating.

Between its covers there is disclosed the romance of color and color photography. The author speaks with the authority of persistent research, holding your interest as he brushes away the cobwebs to pick out important transitions in the life of the color photograph.

"The Eighth Art" tells us how to make practical the theories of those great men who gave us color. The author's experiences serve as a short cut to the success of our first attempt at making a color print.

He helps in the selection of the proper equipment for making the negatives. He explains each step in a manner comparable with our ability to follow directions. He gives us a clear picture of the life of the color photograph up to the present day.

To the advanced student the Eighth Art is a historical compilation of the progress of color photography and the author's application of the various methods of making a color print.

To this reviewer the book was absorbing and convincing up to the point where the author digresses to introduce his personal opinions and criticisms of present day motion picture production with respect to its "black and white movies—color added." And his foot stamping exclamation, "I am furious at Hollywood because they have concentrated on natural color and overlooked emotional and psychological color values." Whether or not this chapter on Hollywood landslides this book into unpopularity among the leaders of progress of the motion picture industry remains to be seen.

BERT GLENNON, A.R.P.S.,A.S.C.

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PHOTOGRAPHIC CHEMICALS AND SOLUTIONS . . .

Crabtree, Matthews

INTO the making of this book, illuminated with nearly 100 illustrations, has gone some of the knowledge acquired by Messrs. Crabtree and Matthews during the past twenty-five years in compounding photographic solutions and studying their application to photography in the Research Laboratories of the Eastman Kodak Company.

The nucleus of this work was contained in the article "How to Prepare Photographic Solutions" (Brit. J. Phot. 66: 365, 1919). Subsequently many scientific papers cognate to this subject were published by the authors and their coworkers and the material of practical value in these papers has been extracted and combined in this single volume for reference purposes. To this compilation has been added considerable hitherto unpublished information.

The requirements of the small as well as the larger user of photographic chemicals have been kept in mind throughout. The hope is expressed by the authors that the book therefore will be of value to all types of photographers including amateurs, professionals, scientific investigators, x-ray, photo finishing, photo-mechanical and motion picture workers.

In their introduction the authors note that the majority of amateur photographers prefer to purchase their chemicals in the prepared form. Within recent years, they point out, an increasing number of advanced amateurs, professional photographers and photofinishers also have begun to use package chemicals more extensively, but many workers and the majority of motion picture laboratories prepare their photographic solutions from the component chemicals.

Emphasis is laid on the fact that knowledge of the fundamental principles of solution preparation and use is important whether prepared powders of component chemicals are preferred. They serve notice that it is the purpose of the book to supply such information.

There are thirteen chapters, covering 278 pages, and an appendix and indexes covering an additional 82 pages. The book is finely made, in all departments. It is in keeping with what one would expect from Messrs. Crabtree and Matthews—that it should be tops in the realm of photography.

Photographic Chemicals and Solutions. By J. I. Crabtree and G. E. Matthews. Kodak Research Laboratories, Rochester, N. Y. American Photographic Publishing Company, Boston. Pp., 360. Illustrated. 1939. $4.

New 16mm. Test Reel

A new 16mm. precision test reel for projection in sound has been announced by the S.O.S. Cinema Supply Corporation of New York City. This test reel is especially valuable to the visual education or physics departments in schools and institutions and, in fact, wherever 16mm. sound-on-film pictures are projected and studied.

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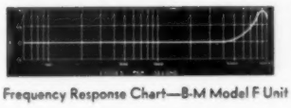

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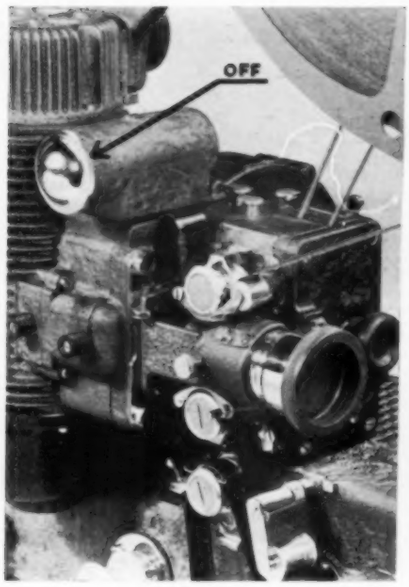

New pilot light now standard equipment on Bell & Howell Model 138 Filmosound Projector

B&H 138 FILMOSOUND TO BE EQUIPPED WITH PILOT LIGHT

A BELL & HOWELL bulletin announces a new automatic pilot light will be standard equipment on all Model 138 Filmosound projectors effective with January production.

The pilot light is so situated on top of the blower housing as very clearly to illuminate the projector film-moving mechanism and amplifier controls. The light is operative as soon as the projector current supply cord is connected with current source.

The pilot light is turned on automatically simply by pulling the pilot light cap out of its housing. Pressing cap back into housing turns off the light. The lamp is easily accessible for replacement by unscrewing pilot light cap.

Through use of this new ever-ready pilot light the projector operator can perform film-threading operations and see to operate amplifier controls without resorting to other illumination. Illustration herewith shows pilot light—both "on" and "off" position—as mounted on a Bell & Howell Model 138 Filmosound.

Techniprocess Corporation Reorganizes and Expands

The Motion Picture Process Corporation has reorganized as the Techniprocess and Special Effects Corporation. Mario Castegnaro continues as president, with Bertha Castegnaro as secretary. Equipment in the plant at 1117 North McCadden place is being expanded. This also applies to the battery of Flatlite Screens, which at present comprises a half dozen, ranging in size up to 16 by 20 feet.

The personnel lists Richard Fryer, A.S.C., as general manager; Lewis L. Mellor, A.S.C., optical technician and consultant; Lewis Physioc, art director; Paul R. Cramer, projectionist, and Fred C. Windermere, special representative.

New Size Agfa Acid Hypo

In answer to the many requests of photographers who desire a larger sized container of acid hypo for the sake of convenience and economy, a new one-gallon size (two-pound) container of Agfa acid hypo has been announced. Available at all photographic dealers at $.45, the new one-gallon size of acid hypo provides a ready-to-use fixing solution when dissolved in water.

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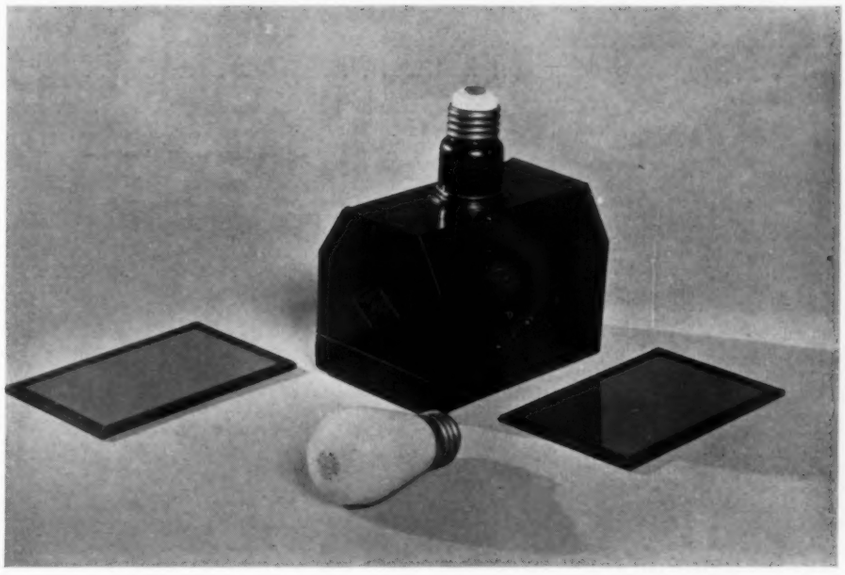

Agfa's New Safelight

A new universal safelight outfit with interchangeable safelight filters has just been introduced by Agfa. The complete set includes a black enameled Agfa safelight lamp, Agfa A-3 green safelight filter, Agfa A-7 red safelight filter and a 10-watt yellow bulb.

Used in the lamp without a filter, the yellow bulb provides safelight illumination for contact printing papers such as Convira. With the red filter, the safelight may be used for Plenachrome and other orthochromatic films.

When developing panchromatic films, except those which require development in total darkness, the yellow bulb and the green filter assure safe, indirect darkroom illumination.

The lamp fits any standard electric outlet and may be screwed into either a wall socket or drop cord outlet. Because of its compact and convenient form, the safelight may be moved about and placed in positions impossible with a larger type lamp. It is listed at $1.95.

Wholesale Takes on Eumig

John Brassington and Joseph Brawner, operating under the corporation name of Wholesale Camera Supply Company, 122 East Seventh street, Los Angeles, have taken on the distribution of the Eumig C4 camera. It is designed for double 8mm. film and is operated by an electric motor. It is equipped with an f.2:5 Berthiot anastigmat lens. The weight is 22 ounces and the size 2 by 3¾ by 4⅝ inches.

Agfa Introduces New Printing Frame

A new printing frame for negatives ranging from 1 by 1½ inches to 4 by 6 inches is announced by Agfa. The Agfa Masking Print-Frame, as the new model is called, is equipped with adjustable masks, so that negatives of various sizes may be accommodated. This improved masking device also makes possible easy and quick cropping of negatives. In addition, lengths are marked off in inches along each side so that the print may be made accurately to the desired dimensions.

Visits Homeland

Joe Ruttenberg, A.S.C., who recently photographed "The Great Waltz" for MGM, left January 10 for a visit to his old home in and around Boston. He will return to his later home in Beverly Hills to learn "The Great Waltz" has been named as his studio's candidate for the photographic award for 1938 to be bestowed by the Academy.

Australia Bound

Emery Huse, West Coast Manager of Eastman Kodak Company and technical editor of American Cinematographer, sails Wednesday, February 1, for Australia. He will be away until April 19 attending to Kodak business and will visit both Sydney and Melbourne. He will be accompanied by his family.

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ENGINEERS EXPECT BEST COAST CONVENTION EVER

THE Pacific Coast Section of the Society of Motion Picture Engineers is busily engaged in lining up arrangements for what is anticipated will be the best SMPE convention ever held on the coast—even surpassing in subject matter and attendance the last convention here in 1937. The date this year is April 17 to 21 and the Hollywood Roosevelt Hotel is the place.

Major Nathan Levinson, executive vice president of the SMPE for the current year; Loren Ryder, chairman

William C. Kunzmann
Convention Vice-President
SMPE 1939

of the section, and Homer Tasker, governor of the parent body and chairman of local arrangements, head the large group of local members who are setting details and arrangements.

Convention sessions will be open to all Hollywood technicians, engineers, cameramen and others interested in the technical phases and developments of the industry.

Program of papers is being lined up to be as complete and informative as possible for those technicians on the production side of the industry.

For the convenience of those employed in studios and plants who might not be able to attend daytime sessions arrangements have been completed for presentation at two night sessions of important papers on sound, photography, latest laboratory practices and other subjects of studio interest. These will be held Tuesday, April 18, and Wednesday, April 19, at the Filmarte theatre on Vine Street.

The tentative program, as arranged by Convention Vice President W. C. Kunzmann during a recent visit to Hollywood, includes:

Monday—Informal luncheon and welcome by eminent men within the industry; afternoon, technical session and committee reports; evening, special studio visit for visiting members and guests.

Tuesday—Morning technical session; afternoon open for studio visit; evening, technical session at Filmarte theatre.

Wednesday—10 a. m. and 2 p. m., technical sessions; evening session at Filmarte theatre.

Thursday—Morning technical session; evening, semi-annual banquet and dance in Blossom Room.

Friday—1:30 p. m.—technical, business session and open forum.

Most of the technical sessions will be held in the Blossom Room of the Roosevelt. Arrangements are being made for

Nathan Levinson
Executive Vice-President
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EQUIPMENT FOR SALE: AKELEY CAMERA with two lenses 2 and 6 inch, five magazines, Akeley Gyro tripod cases for all, priced at $475.00. DeBrie Parvo camera with automatic shutter and focus on film magnifier, three lenses 40mm, 50mm and 75mm all F3.5, ten 400 foot magazines, DeBrie precision tripod, solid leather cases for all, will sacrifice for $250.00. 1 Universal camera with automatic shutter, one 2-inch lense F3.5, three 200 foot magazines, Universal inclosed head tripod, will sell for $90.00. 1 DeVry spring drive camera, 2 inch f3.5 lens and heavy friction head tripod, solid leather case for camera, $75.00. 1—3¼x5½" Graflex with Kodak f4.5 lens, holder for twelve cut films, also film pack holder, $40.00. Make use special price if desire all above equipment in lump. Florida Commercial Films, 21 N. Ocean St., Jacksonville, Fla.

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Write now for complete details on these sound film projectors. Ask also for an up-to-date list of a *thousand* Filmosound Library films, including Hollywood features from M-G-M, RKO, Universal, and other big studios. Films are available for rental or purchase. Bell & Howell Company, Chicago, New York, Hollywood, London. *Established 1907.*

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Includes all the features essential for home projection of 16 mm. sound and silent films. Has "blimp" case for quiet operation, speaker-hiss eliminator, "floating film" protection, 750-watt lamp, and three-quarter-hour sound film capacity. Complete in two light cases, only $298

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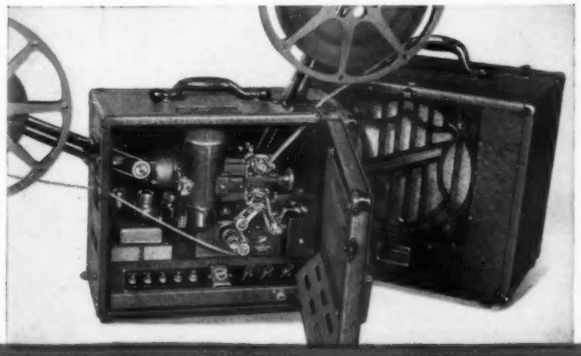

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